A Clinical Lecture
ON
SOME CASES OF RESECTION OF THE LARGE INTESTINE FOR MALIGNANT GROWTH, WITH RE-ESTABLISHMENT OF THE INTESTINAL TRACT.

Delivered at St. Thomas's Hospital on July 5th, 1899,

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GENTLEMEN,—Most of you will remember this patient, who occupied a bed in the Albert ward recently and who underwent operation for removal of malignant disease of the cæcum. Now he looks fat and well, and is browned by the sun after a visit to a convalescent home and his appearance is changed very much for the better. His case is as follows. He is a porter, aged 34 years, and was admitted to the hospital on May 5th of this year. He had complained of "wind in the stomach" for some 15 months, but it was not until March 18th that he noticed a lump in the lower part of the abdomen on the right side. There had been no pain or unusual discomfort until May 3rd, but on that day he was seized with pain in the region of the swelling, which continued until his admission to hospital. There was no history of vomiting or of constipation. He had lost weight to the extent of one and a half stones since the beginning of the illness. A large swelling could be felt in the right side of the abdomen, hard and tender to the touch. It was apparently about three inches long by one and a half inches broad. There was impaired resonance on percussion over it, but the abdomen was resonant around. It could not be moved to any extent and appeared to be attached to the abdominal wall. The iliac region was slightly bulged. With the exception of this swelling there appeared to be no other evidence of disease. The temperature was normal. It was evidently a case for exploration, as although there was some inflammatory change about the part the suggested diagnosis of peri-typhlitis was hardly borne out by the characters of the swelling, nor did it occupy the iliac fossa as is usually the case. On May 10th a longitudinal incision was made over the swelling, the sheath of the rectus was opened, the muscle was drawn inwards, and then the posterior layer of the sheath was divided. A large hard mass was found with the omentum firmly adherent to it and both adherent to the abdominal wall, but the finger readily peeled them off. The incision was enlarged upwards and the growth was fully examined. It was situated in the cæcum and completely surrounded it. The ileum and the ascending colon above the ileum were free; the appendix was also free. The tumour was brought outside and the peritoneum and the wound were packed with strips of cyanide gauze. The omentum was then divided between forceps and the free ends were ligatured. The posterior reflexion of the peritoneum was then cut and the growth was brought more fully into reach; two pieces of rubber tubing were then passed round the ileum close to the ileo-cæcal valve and the bowel was divided between. A similar procedure was then carried out with regard to the ascending colon, the section of the gut being made about one and a quarter inches above the growth. Care was taken to prevent escape of the contents into the wound and the soiled gauze was at once replaced; the isolated intestine with its growth was wrapped in gauze and the meso-cæcum and other attachments were divided. As there were numerous diseased glands in these a somewhat wedge-shaped piece was removed and the vessels were caught as they showed themselves. The free end of the ascending colon was held up, the rubber tubing was removed, and the free edge was invaginated and closed by means of a continuous Lembert's suture. An opening was then made in the side of the ascending colon farthest from the meso-colon, about an inch above the end, through the middle of a muscular band, of sufficient size to admit comfortably the end of the ileum. The tube was now removed from this and it was held in position whilst a continuous suture was run round uniting all the coats of the small bowel to the opening in the large bowel. After this a second continuous Lembert's suture was passed which brought the peritoneum into contact for about one-eighth of an inch all round. The area of operation was thoroughly cleansed, all gauze strips were removed, and the sutured bowel was placed in position and covered with the omentum. The various layers of abdominal wall were sutured with silk, which material was used for everything excepting the superficial sutures, which were of salmon-gut.

The growth was annular and was especially extensive over the inner side of the lower part of the colon and cæcum, whilst it involved part of the ileo-cæcal valve. The strictured condition of the bowel was below the entrance of the ileum and did not involve the appendix; it had, therefore, not produced any obstruction. It proved on microscopical examination to be spheroidal-celled carcinoma. Cyanide dressings were put on. There was some shock after the operation, but not of a dangerous character. The patient had no vomiting, but he was for a time much troubled by ether bronchitis. The bowels acted after an enema on the fifth day and there was no trouble with them afterwards. Suppuration took place in the wound and the pus was very offensive, but not feculent. The patient left the hospital on June 10th and has continued well, having put on a good deal of flesh. The scar of the operation wound is sound and without trace of weakness, and from what we have observed of this method of division of the abdominal wall for the removal of the appendix it is not likely to cause any trouble in the future. No truss is required and the patient has resumed his employment.

This case is an example of what may be done when a patient has a growth which has not caused obstruction of the bowel. Although removal of the growth was difficult and apparently complete it was so large, and the amount of affection of the glands was so evident, that it is improbable that the patient can go for many months without recurrence. Meanwhile he is very happy, has no difficulty with the bowels, and does a good day's work.

The majority of cases of new growth in the large bowel are discovered during the progress of an operation for obstruction of the bowels of chronic character. In such circumstances resection of growth can rarely be resorted to at the time; certainly no attempt at joining the gut should be made until later, even should it be possible to excise the diseased part. There was in the ward a few days ago (June 23rd) a thin-faced little woman who came to be examined for a swelling in the epigastrium which her medical attendant (Dr. E. A. Roberts) considered to be secondary malignant growth of the liver. Unfortunately he was right. Her case will be in the recollection of most of you and it illustrates the method of resection of growth when obstruction is present which was suggested and successfully done by Mr. F. T. Paul some time ago. The patient is a married woman and at the time of her admission to the Elizabeth ward on August 4th, 1898, she was aged 45 years. There was no history of cancer in the family but she suffered from habitual constipation for which until lately rhubarb pills were taken with a good effect. A fortnight before to the constipation were added sickness and retching with pain all over the abdomen. An attempt was made to get relief by enema but without result. On admission she was found to be a weakly woman with anxious expression, complaining of pain and distension of the abdomen. The abdomen was barrel-shaped, much and uniformly distended, and somewhat tender on palpation. No abnormal lump could be found. Nothing like a growth could be felt per rectum, the tongue was much furred, and there was frequent vomiting and complete constipation. The pulse was 120. After her removal to the operating theatre and the cleansing of the abdominal wall a median incision was made for purposes of exploration and when the hand was introduced the cause of the obstruction was localised at the sigmoid flexure. Here a hard lump could be felt, above which the intestine was distended. Incision was then made in the left iliac region, as for colotomy, and the lump was drawn out; it was a well-marked cancerous stricture of the sigmoid. It was freely moveable, there being no shortening of the meso-sigmoid, nor could any enlarged glands be felt. Every care was taken to shut off the peritoneal cavity with gauze and the growth was isolated by the

application of rubber tubes. The meso-sigmoid was divided between forceps and ligatures were placed on the attached margin as required. A large Paul's tube was fastened in the upper end and a small one in the lower end. The opposed mesentery was sutured together where the ends of the bowel came in contact and these ends were fixed in the wound with two sutures, one in the upper and one in the lower part. The median incision was closed, being sutured in layers. This operation gave complete relief to the obstruction, the general condition of the patient rapidly improved, and attempts were made to close the artificial anus. A clamp was applied on several occasions to the septum between the ends of the gut and it caused a good deal of pain; on each occasion it was put on as far down as possible and left to cause slonghing of the tissue included in its blades. The patient complained very much of the pain and, in addition, the progress thus made was slow, whilst the remaining part of the septum appeared to be becoming thickened. On Dec. 23rd an incision was made in the left linea semilunaris and the bowel was exposed, a lateral anastomosis was made, the opening being about two and a half inches in length. A posterior row of continued Lembert's sutures was put in, then the opposed intestine was adapted and incised, great care being taken throughout to keep the peritoneum free from contamination. A continuous stitch was put in to include all the coats of the bowel This brought the openings firmly into contact and arrested hæmorrhage. The outer row of continuous Lembert's sutures was then carried forward until there was a surrounding area of opposed peritoneum about one-third of an inch wide all round the opening. The wound in the abdominal wall was then sutured in layers. No disturbance followed this operation but the fæcal matter still came through the artificial anus and none passed by the rectum. On Jan. 5th, 1899, the artificial anus was closed. A thick silk ligature was carried by means of a Belloc's sound into the upper end of the bowel and through the opening made a fortnight before. The free end was drawn through the lower opening and the ligature was tied round the remains of the septum. It was left in the bowel to make its way through the tissue which it enclosed. The artificial anus was then separated without opening the peritoneum, turned in, and sutured. A small sinus formed through which a little fæcal matter escaped, but this was well when the patient left the hospital on Jan. 29th, and when seen in June the operation-wounds were quite healthy, there was no sign of growth, and the bowels acted satisfactorily with the occasional use of aperients. The growth caused a complete stricture of the bowel through which a forefinger could hardly be passed and microscopically it was a columnar-celled carcinoma.

This case has presented one way in which growth of the large bowel may be removed when the state of the patient will permit of it. Sometimes it may not be considered advantageous to excise the growth at once, but as its attachments permit of its being brought outside this is done and the obstruction is relieved by the placing of a large-sized Paul's tube in the bowel above the obstruction and the removal of the growth is carried out at a later date. Occasionally the distension of the abdomen is so great that the surgeon cannot draw the growth outside the abdomen. It will then be necessary to adopt some other plan, such as colotomy, resection of the diseased intestine being deferred until the distension of the intestine has subsided. If the artificial anus is near the growth, intestine including both these may be removed and the intestinal tract re-established by anastomosis.

In the autumn of last year a younger female patient was under my care and some of you have seen her since in the wards when she has come to be seen. She was single and aged 29 years. On July 31st, 1899, the patient was taken with abdominal pain which seemed to move about. On the next morning she had vomiting which continued all day. She was put to bed and the vomiting diminished, but general swelling of the abdomen ensued. This continued, although the bowels usually acted to some extent daily and she suffered a good deal of pain, but in no particular part of the abdomen. On August 22nd she vomited very offensive material and as there was no marked improvement in her condition Dr. Goodhart saw her in consultation with Dr. Turtle and Dr. Sayres of Woodford. On the following day I saw her and found the abdomen to be much distended. Having agreed with the diagnosis of malignant growth of the large intestine operation was at once performed. Through a median incision below the umbilicus it was possible to feel a growth at the splenic flexure of the colon, and a second incision over it enabled its extent and attachments to be more fully defined. The abdominal distension was so great that although the mesocolon was not infiltrated the growth could not be brought to the surface, still it appeared favourable for excision at some future date. A coil of the bowel above it was brought out and held in the wound by means of a pair of Spencer Wells forceps passed through the mesocolon across the wound and the insertion of a few stitches. A large-sized Paul's tube was put into the bowel above. The median incision was closed. Complete relief to the obstruction was afforded by this operation. The tube was removed on August 26th, and two or three times there was fæcal matter passed by the anus. A limited cellulitis behind the opening retarded convalescence, but the patient improved rapidly and was admitted to St. Thomas's Hospital on Sept. 19th. She looked much better and had put on flesh. The abdomen was normal in appearance excepting for the artificial anus and the presence of a lump below it. Having been prepared for operation this was performed on Sept. 23rd. Ether was administered and the wound was thoroughly cleansed. A plug of cyanide gauze was placed in the artificial anus. Incision was made along the scar below the artificial anus and the peritoneum was opened. The adherent bowel was separated by the finger from the peritoneum up to the artificial opening. Then with the finger in the abdomen as a support the incision was rapidly carried round the artificial anus. The adhesions above it were not very firm and they were easily separated. Gauze was then packed round the part to be removed and the peritoneal cavity was shut off. Rubber tubes were carried through the mesocolon and clamped with artery forceps, two being below and two above the part to be removed. The bowel between the lower tubes was cut across and the ends were carefully cleansed. Each was wrapped in gauze. The mesocolon was then cut through with scissors, the bleeding points being caught as they showed themselves, until the line between the upper tubes was reached and the bowel cut across above. The two free ends were inverted and closed with Lembert's sutures; afterwards they were placed side by side, a row of Lembert's sutures being placed behind for a distance of about two and a half inches and the two adjacent portions of bowel being incised at an equal distance (about a quarter of an inch) from them for two inches. The edges of the openings were united by a continuous stitch through all their coats, then the outer row of Lembert's sutures was continued. After the cleansing of the area of operation and the removal of the gauze the gut was placed in position and the wound was closed without drainage. Vomiting as a result of the prolonged etherisation was severe and the patient developed some bronchitis with consolidation about the right base. The shock from the operation was marked but she gradually rallied. The bowels acted on the sixth day, after a simple enema, other enemata given earlier having proved ineffectual. She left the hospital on Oct. 14th and has continued well since, the bowels acting regularly. The portion of bowel removed was four and a half inches in length, the width of the growth being one inch; it was a columnar-celled carcinoma. No glands could be felt at the operation. The use of interrupted Lembert's sutures rendered the operation a longer one than would have been the case with the continuous stitch.

In the following case the growth which produced the symptoms of obstruction had become intussuscepted in the rectum and another method of suturing had to be employed.

A man, aged 44 years, was admitted to St. Thomas's Hospital on Feb. 6th, 1897, suffering from intestinal obstruction. Three years before he had been in an infirmary for 13 weeks for stoppage of the bowels, but he left apparently well and had had no more trouble until three weeks before admission when he suddenly became ill again. There had been gradually increasing distension of the abdomen, with pain and the passage of a good deal of blood per rectum but no vomiting. On admission he was found to be a thin man with an anxious expression of countenance. He complained of pain in the abdomen and discomfort there. Examination showed a general tympanitic enlargement with peristalsis of the intestine, there being no irregularity of surface beyond that. The rectum had been examined and it was stated that a malignant growth of that part could be easily felt. The indication was

to relieve the obstruction, and accordingly an incision in the left iliac region was made with the view of performing colotomy there, but no trace of large bowel could be found until the hand had been passed into the pelvis. From the pelvis upwards in the middle line passed a large firm band the end of which appeared to be impacted in the rectum; at the point of impaction there was a collar around it and it was evident that the bowel was intussuscepted. Renewed examination per rectum showed that the growth which had been felt was situated at the apex of the intussuscepted part. It was difficult to get a good examination from the left iliac wound and traction on the large bowel did not appear effective, so a median incision was quickly made and an attempt to disentangle the intussusception was tried, but without success. It was not possible either to make an artificial anus in the middle line, as the stretched gut was tense and its lumen almost obliterated until it ran off to the hepatic flexure of the colon. Recourse was therefore had to an opening in the right side and a Paul's tube was placed in the cæcum after the bowel had been secured to the abdominal wall. Gradual improvement followed, but on account of suppuration in the median wound and the feeble condition of the patient it was not considered advisable to do further operation until March 24th. The artificial anus acted well but presented the usual disadvantages of one made in that situation. A discharge of mucus and blood had come away from the anus from day to day. Before this operation for some days the rectum was washed out with boric lotion.

During the operation the patient was placed in the lithotomy position, and after cleansing the part an incision was made backwards from within the rectum to the top of the coccyx. A pair of ring forceps was then placed on the circumference of the presenting intussusception and it was drawn down as far as possible. By means of a pair of scissors the external wall of the intussusception was cut round in a circular manner about an inch from the free edge, the peritoneum being opened in the whole extent of the incision excepting posteriorly. The inner wall and the growth were then pulled down and divided in a similar manner, the incision passing about three-quarters of an inch above the tumour and some three inches above the lower edge of the growth. A number of artery forceps were applied to the free edge of this to prevent its slipping back as the division was made. The arteries were secured as they were divided. Silk sutures were then passed through both walls of the intussusception, including all the coats of the bowel and these when tied effected a close apposition of the bowel at the line of resection. A large-sized indiarubber tube was then passed into the bowel above, so as to carry any escaping contents of the bowel easily past the line of union. The incision in the soft parts was closed.

This operation was followed by a normal temperature and an absence of pain. The tube was removed on March 27th. A considerable amount of mucus and some blood were passed from time to time until April 7th and this was relieved by a starch and opium enema. By May 5th the patient was up and going about in a chair. The artificial anus was, unfortunately, a source of considerable annoyance and it was necessary to deal with this. The difficulty was, however, not an easy one to overcome, for a well-formed spur was present and this was not readily removed. A large rubber tube was passed into the colon and the spur was thus pushed backwards whilst fæcal matter passed through the tube into the large bowel beyond. After some days of this treatment the tube was removed and the artificial anus was closed by operation. This was only partially successful, but most of the fæcal matter passed into the bowel beyond the site of operation and the patient was rendered so much more comfortable that he refused further operation. A pad over the opening checked much of the escape of fæcal matter externally and the bowels acted at irregular intervals. The growth was a columnar-celled carcinoma. The patient has not been heard of since he left the hospital.

With the help of Mr. W. F. Richardson I have searched the literature of recent years for records since the paper by Dr. Kendal Franks[1] of cases similar to those under consideration and have grouped them under two headings which are of great practical importance. 1. Those in which obstruction of the bowels was present at the time the patient was treated. 2. Those in which operation was performed before obstruction had come on, or in which obstruction had been relieved by previous operation. Cases in which growth had been removed but in which the continuity of the canal had not been re-established are not included.

1. Obstruction present at the time of operation—recoveries, seven; deaths, four. (*a*) Primary resection with immediate end-to-end anastomosis—males, three; females, five; died, four females. (*b*) An opening made into the bowel for the relief of the obstruction and resection performed later—spur destroyed and the opening closed, one; recovered, one; partial success, one.

2. No obstruction present at the time of operation—recoveries, six; deaths, four. (*a*) Resection and end-to-end anastomosis—recovered, two; died, three. (*b*) Resection and lateral anastomosis—recovered, one. (*c*) Preliminary colotomy and later end-to-end anastomosis—recovered, three; died, one.

These do not include the four cases described above. At St. Thomas's Hospital the statistics of operation are somewhat in favour of lateral anastomosis after resection of the large intestine.

[We append an abstract of Mr. Battle's remarks upon technique and other points in these cases.]

Silk was recommended for the sutures and when possible a continuous stitch, as opposed to an interrupted one, for the intestinal sutures. As far as possible it was advised that instrumental aids and special apparatus should be avoided and that reliance should be placed on careful suturing with thorough asepsis. It was of great importance to get rid of the growth at the first operation, for the patient might refuse the risk of anastomosis should it be advised at a later date. Some of these growths were not very malignant and might exist for years before they affected the system or produced secondary deposits, as had been shown in cases of colotomy done years ago. We must trust to the physician for the early diagnosis of the growth; only too often at the time of operation the only thing the surgeon can do was colotomy. If the case was seen before obstruction was present, should the growth be too extensive or too adherent for resection, a short-circuiting might be done and that was far more comfortable than a colotomy, though the colotomy of the present day was not nearly so troublesome as formerly.

[1] Transactions of the Royal Medical and Chirurgical Society, 1889.

A Presidential Address
ON
MEDICAL POLITICS.

Delivered before the Wigan Medical Society on Oct. 19th, 1899,

BY LUTHER COOKE, L.R.C.P., L.R.C.S., AND L.M. EDIN.

GENTLEMEN,—When you conferred upon me the honour of selecting me as your president for this year, knowing that a paper was always expected I made up my mind to devote some considerable time to the subject and to give you an elaborate and possibly a lengthy production. It is an ill wind that blows nobody good, and fortunately for you I was prevented by unforeseen circumstances from carrying out this fell project. During the first six months of the year I was either more or less on the sick list or away from home, and all thoughts of such a thing as a paper had vanished and I remained in blissful ignorance of the cloud looming up in the distance until a few weeks ago, when our worthy secretary, who forgets nothing, gently but very firmly reminded me of my obligation to the society. The prospects of settling down to write a paper during the tropical heat of August, surrounded on all sides by an outbreak of English cholera the most severe known for several years, were not of the most cheerful nature. Therefore, gentlemen, you may safely make yourselves comfortable and extend to me some of your acknowledged patience: the remarks I have to make will be attentively listened to, being most interesting in their brevity. After the effects of this shock had passed away I began to hunt round for a subject. "Read a case" came instinctively to my mind, but as this would be like taking coals to Newcastle I cast that thought adrift. A few days later, when looking over the daily paper, I came across in big print the word "Transvaal" and from that I

got a cue. Here was something interminable. Any amount of words and bluster, much talk of various kinds of policy and politics and no action, just the very thing—fits the medical profession to a spoonful, I thought. After much cogitation and many sleepless nights I decided to say something about medical politics.

The question might be raised as to whether such a subject ought to be brought before this society, but it seems to me that whatever is discussed by the General Medical Council may be safely brought under the notice of such an assembly as this. There must of necessity be in every society (be it scientific or otherwise) some amount of business transacted and it must show some commercial knowledge, without which it will speedily go to the wall.

I was much struck the other day by a remark made in my presence by a man in business which was to the effect that so far as money and business were concerned the medical profession of the present day was "under the table." The sooner we recognise that there are two aspects, the scientific and the commercial, to our profession the better it will be for us. There can be no doubt that the medical profession at this moment is passing through what might be termed a crisis; the result of this crisis, disagreeable and harassing as it undoubtedly is in its passage, will depend largely on the efforts and cohesion of medical men themselves. We may rest assured that the amount of good accruing therefrom will be in proportion to the activity, tact, and pilotage capacity displayed by the leaders of the profession; and the leaders of the profession, presumably the General Medical Council, are so far removed from the general body (who will be the sufferers or otherwise) that they will be largely influenced in their action by the interest manifested and by the expressions of organised bodies of general practitioners. A closer communion and a larger representation in that Council should be one of the rungs in the ladder of our policy.

Time brings changes and the medical profession can no more afford to remain stationary or to retain its ancient customs than any other part of the community. The profession of the present day differs very much from that in the early days of its recognition. In those good old times the physician was looked upon as a person of considerable importance, of much learning (no doubt, as in the present day, a good deal of it assumed) and, dressed in his distinctive robes, was a man of note. He held himself more or less aloof from the rest of mankind and surrounded himself with a mystic atmosphere which was looked on by the plebeian as next to the supernatural and added to the awe with which he was regarded. The commercial aspect of his profession was a small matter. He was beloved by the poor, was saluted with respect, and was held in esteem for his charity. Trade unionism and "doctors' strikes" were not dreamed of. But even in those times there were exceptions, and we read of some rogues who assumed greater knowledge than their fellows, having special treatment and medicines for the rich, adopting any device to gain the filthy lucre. All this has now changed. The practitioner of the present day we see dressed in tweeds with a straw hat, he plays cricket in flannels, rides a "bike," plays golf in knickers, mixes much with the public, is addressed in the vernacular and saluted with a nod, and his services are valued accordingly. He may be employed by societies or associations, and doled out at so much per head, or his learning may be given with pounds of tea,[1] or better still, he may give common advice to the common people and extra superfine ditto to the wealthy. Not long ago there appeared in a London window a notice to the following effect:—"Advice and medicine for the working classes. Advice and medicine, 3*d*.; extra ditto, 4*d*.; by the week, 1*s*."

If we are to take notice of the cranks who are now corresponding in the medical journals there is just a possibility of our return to the good old days. There are some who advocate a distinctive dress, and we may yet see ourselves in flowing robes and cocked hats. Verily the professional millennium cannot be far distant.

The recent proceedings of the General Medical Council have given rise to much speculation and uncertainty in the minds of many and the general feeling has been that the resolutions and recommendations of that august body were not sufficiently explicit. "Tell us exactly what you mean," has been the general cry. I would like to point out that this is impossible. The Council addresses us as a sensible and educated community and expects us to accept its recommendations in their broadest sense. It would be manifestly outside the province of that Council to enter into a mass of details which in order to include every variety of doubtful practice would be most cumbersome and derogatory to themselves. The editor of the *British Medical Journal* in reply to a correspondent puts it very tersely. He says "The General Medical Council has expressed its strong disapproval of medical practitioners undertaking contract appointments where the conditions are such that the practitioner cannot give proper attention to the patients under his care or where touting or similar means are made use of to obtain patients." It does not matter what form the soliciting may assume—the canvassers may be paid or not or they may receive some remuneration in the shape of bonuses or expenses—this is quite immaterial, the fact remains. In the same way with remuneration, if the practitioner contracts at such a low figure that he cannot do justice to the patient or if he pretends for a few pence to give what the Council knows full well he cannot, the fraud is the same and it brings the offender under the expression of the Council. The effect of such legislation is more to the advantage of the public than the profession and will ultimately lead to a better understanding on both sides.

It will be remembered that the action of the General Medical Council in reference to the employment of unqualified assistants was regarded by many as a hardship and unnecessarily severe and attempts were made to form a separate class of men to be duly registered as "unqualified assistants." Fortunately the Council stood firm and their decision in this matter is now universally recognised as being most proper, beneficial alike to the profession and to the public at large.

The whole gist of the recent labours of the General Medical Council may be summed up briefly in this, that the practitioner shall not commit a fraud upon the public, or, in plain English, margarine shall not be sold for butter. The General Medical Council ought to receive the entire support of the profession. At the same time it is generally admitted that the representation of the bulk of the profession is not reasonably in proportion to its interests, and we should endeavour to secure an increased, a more adequate, representation on that Council.

It is quite possible that the Council may not be fully aware of the evils which the general practitioner has to combat. The public are so easily gulled by impostors and quacks who pick the pockets of the working classes, impoverishing them to such an extent that many after being so fleeced either run on accounts, never to be paid, with the practitioner or go to some charitable institution. The law relating to impostors is quite inadequate, for whereas an unqualified man may not call himself "doctor" or "surgeon," yet when prosecuted he goes one better and takes to himself a higher sounding title, such as "professor," or "oculist," or "aurist," or "specialist" in certain diseases, thereby acquiring increased importance in the public estimation. It is ridiculous to imagine that the public are not deceived by the use of these assumed titles. Let me mention two or three cases which came under my notice within the past few weeks. In one case a man who had sustained a slight injury to his knee admitted that he had been to Manchester and had paid a guinea on four separate occasions to a bone-setter and he excused himself by saying with no little pride that the man he had consulted was more than an ordinary doctor: he was a "professor." I found that this professor advertised in the local papers and travelled from town to town. In the two other cases the patients paid a local "professor" a guinea for first consultation and 1*s*. on each occasion afterwards under the impression that they were consulting some person better than, as they term it, "a common doctor." But this is not limited to the so-called ignorant classes—well-to-do and educated people have a hankering after the "professor" bone-setter. I must say that I was somewhat staggered when I saw in a monthly periodical—a paper generally considered sensible and respectable—no less than seven pages with numerous plates devoted to the sayings, doings, and virtues of a quack bone-setter, because, I presume, he has unblushingly ascribed to himself the title of "professor."

It is impossible to detail all the dodges adopted by these self-styled professors of the healing art. I may just mention one amusing case. One of the dupes stafed with much seriousness and evident conviction of its truth that the

[1] This was actually the case in Liverpool. An enterprising firm of tea-merchants offered free medical advice to purchasers of a pound of tea.

specialist inoculated him on his temple and told him that it was with a special kind of lymph to cure deafness in all its forms. The professor, moreover, added that he was in communication with the Government and advising it to purchase his discovery, which would bear the title of "Le Grove Lymph." Brethren, take a wrinkle. Chalk off the "Dr." from your door-plates; substitute the charmed word "Professor," adding also a little prefix to your names.

There are other matters, if your patience will permit, which I should like to mention. First, the wage-limit; this has been from beginning to end a huge mistake in contract practice, and from a business point of view it is illogical. A tradesman does not sell his commodities (unless there is a difference in the quality) at prices varying with the income of the customer—a pound of butter is a pound of butter whether the purchaser be rich or poor; nor does the skilled artisan work for a fraction an hour less because his employers' pockets vary in length. We must bear in mind that the workman is supposed to receive, and he ought to receive, the same quality of advice, medicine, and attendance as his employer. There is no reason why a medical man should give his services to an employé at a reduced rate because his employer pays him a low wage; the duty rests with the employer to pay his servants such a rate of wage that they may be able to obtain not only food and clothing but other necessaries without brow-beating the medical man. Such a thing as a wage-limit is simply a premium on low wages, and is so much of a gain indirectly, perhaps, to the capitalists. Then, again, how are we to explain to Thomas Jones that because he receives a wage of 25*s.* per week his medicine and advice may be had for 1*s* 6*d.*, whereas William Atkins, his neighbour, who receives 30*s.* weekly, must pay 2*s.* for the same advice and medicine. Either the former comes to the conclusion that he is getting margarine or the latter that he is paying too much. The "sixpenny man," who scorns to make any difference between rich and poor, is, perhaps, after all the more rational practitioner.

The medical papers are read to a considerable extent by the public, and the public are taking much more interest in the doings of the profession than they did formerly, and when they see the absurdities of the dress crank, the threepenny and the sixpenny doctor, the homœopath, the club contractor who cures all ills at prices varying from 1*s.* 6*d.* or 2*s.* to 5*s.* per annum, and we ourselves a disorganised lot, each against his fellow, verily we cannot be amazed if we are held up to ridicule. The eternal prayer of the medical profession should be,

> "Gude Lord, the giftie gie us
> To see ourselves as others see us.
> It wad frae monie a trouble free us,
> An' foolish notion."

Combination seems to be the order of the day; all trades combine, both employers and employed alike, but there are many who lift their hands in holy horror at the idea of a medical practitioners' combination. No; he has been the knockabout so long that any alteration in the present state is viewed with surprise and alarm. Combination in the profession does not necessarily mean a combative organisation (except, perhaps, among the colliery surgeons who are naturally pugnaciously inclined) but rather it has as its object to bring about a clearer understanding between themselves and their patients. We may take it for granted that the more content and better paid medical men are the better will it be for those under their care.

Then again, the Midwives Bill is a most important matter to the general practitioner. The passing of an imperfect measure whereby a class of partly educated persons is brought into existence—women, I presume, who may be able to attend all normal midwiferies, but not allowed by law or skilled enough to treat abnormal cases—would be most disastrous alike to the public and the profession; for such a Bill would interfere with the complete training of the newly qualified man in midwifery. For instance, if all the normal cases are attended by midwives how is the practitioner if called upon for assistance to determine the proper line of action to be taken? for it is only by practice and attendance on a large number of so-called normal cases that a medical man can decide when to take active measures and when to trust to nature.

Only one more burning question, but that is a big one—viz., contract practice. Contract practice at the best is unsatisfactory, some forms more obnoxious than others. We all know and have heard from time to time the disparaging remarks made about "club doctors." "Only the club doctor" is a very common expression, and as a rule the esteem and respect for the "club doctor" is very small. The question we ought to ask ourselves is, "Are the public right?" My own candid opinion is that the public are right. On the other hand, one hears from medical men themselves such remarks as, "Well, the public will have cheap medical attendance, and what are we to do?" and so on. Medical contract is not like any other contract work. The builder knows exactly how much material will be required and how much time and how many men will be necessary for certain work. I do not know of any trade or profession except our own where contracts are made for an unknown quantity. Moreover, the absurdly low rate paid compels the medical attendant to "rush" his work. He must do it in order to satisfy the large demands made on his services and to stave off a host of complaints which he knows would be made if he failed to put in such a number of attendances as to please his patients and their relatives. We will not inquire too minutely whether in this rush there may be occasionally a little slip in diagnosis or treatment, or how many little victims there may be offered at the shrine of the parents' morbid craving for cheapness. I have seen a good deal of contract practice during the past 20 years or more and the more I see of it the less I like it. 20 years ago in this part of the country the only ones to be treated by contract work were adult males. Now women and children are included, and the system is spreading, and the more it spreads the more does it degrade the practitioner. It is demoralising and bad for the medical man; it is worse for the patient.

That the general feeling of medical men towards each other has improved, at least in this town and district, during the last 20 years goes without saying. There are many of us who remember that prior to that time it was the general and acknowledged rule for practitioners to be at variance, each endeavouring to score, by fair means or foul, a point over the other, and there are, unfortunately, even now men who retain some of our ancestral proclivities and who are known by the methods and expressions used in the scoring process. One medical man would not hesitate to take another's patient, adopting any device to bring about this object, and would treat his new employers to various and sundry remarks deemed to be most suitable for each particular case. If the case had a favourable aspect then it would be: "It is most fortunate you have sent for me in time. I can, I think, pull him through; another twelve hours and it would have been too late." On the other hand, "I am grieved you did not send for me earlier; all my skill, I am afraid, will not avail." And yet another would pull a long face and say, "He is bad, very bad; it will take all my time to pull him through." These are only a few of the very mild disparaging remarks employed.

Let us hope that we are now entering on a new order of things. Frequent meetings and more general intercourse amongst ourselves are essential to the good spirit that ought to exist amongst us, and by this combination, which, as I said before, is not by any means a combative one, the public will derive most benefit, for what can be better for suffering humanity than when their medical advisers talk freely amongst themselves of their cases and of the peculiarities of different types of disease and the best means of relieving it? In the counsel of many there is safety, and when the public become better acquainted with these matters and lose some of their distrust of our motives and recognise that our prime object is more their welfare than are our personal gains, they will appreciate the efforts now being made to secure that end.

PUBLIC ABATTOIRS.—The Corporation of Carlisle have just decided to enlarge, at a cost of £2500, the abattoirs which were erected a few years since. It appears that in the four years 1895 to 1898 inclusive 191 animals were condemned by the medical officer of health as unfit for human food. Local authorities, while recognising the benefits and advantages of public abattoirs, have not generally taken steps to provide them, the old private slaughter-house being still used. With some local authorities, no doubt, parsimony is predominant and much-needed sanitary improvements are consequently neglected, but the example of Carlisle should encourage and stimulate municipal and other local authorities to undertake a similar enterprise.

BORIC ACID AND FORMALIN AS MILK PRESERVATIVES.

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"THERE is no doubt that boric acid if taken in large quantities would be injurious to health, but we have not sufficient information to show whether such minute quantities as are generally added as preservatives would be regarded as having that effect, and more exact information is wanted before it can be decided whether a process which *primâ facie* may be regarded as intended to prevent the loss of valuable foods must be held to be prohibited by law." These were the words in which in 1890–91 the committee of inquiry of the Local Government Board gave its opinion on the important question of the use of preservatives in foods. It is remarkable that that "sufficient information" on the action of minute doses of "preservatives" habitually taken after the lapse of a period of almost ten years is still not forthcoming. The most recent legislation indicates the absence of such information. Thus Article 1, Section 7, of the Sale of Foods and Drugs Act, 1899, states: "Provided that an article of food shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter of such a nature and in such quantity as not to render the article injurious to health." THE LANCET at the time of the appointment of the Adulteration of Foods, &c., Commission in 1896 urged the importance of an inquiry into the question of preservatives and by means of THE LANCET Sanitary Commission on the Use of Antiseptics in Food published the opinions of the most eminent authorities of this country. These were unanimously of the opinion that the use of antiseptics in food was injurious to health, but they could produce no direct evidence in support of their opinions. The Local Government Board have recently appointed a special committee "to inquire into the use of preservatives and colouring matters in food and to report (1) whether the use of such materials or any of them for the preservation and colouring of food in certain quantities is injurious to health, and if so, in what proportions does their use become injurious; (2) to what extent and in what amounts are they so used at the present time."

The use of boric acid and borax.—Boric acid was introduced into medicine in 1702 by Homberg as a sedative salt with anodyne and anti-spasmodic properties. In 1844 Binswanger in the Munich prize essay considered boric acid to be comparatively inert in its action, doses of from one to three drachms causing gastro-intestinal irritation; borax also caused similar symptoms and often an impetiginous eruption. Wild,[1] reviewing a larger number of cases which he had collected from English and foreign literature, sums up the question of boric acid and borax intoxications thus: "Two forms are recognised: 1. In which large quantities of the drugs are rapidly absorbed from the alimentary canal, from serous and other cavities, or from extensive raw surfaces; in these cases vomiting, diarrhœa, general depression, and partial paralysis of the nervous and muscular systems occur and may cause death. Erythematous and impetiginous rashes are common. 2. In which the drug is administered in small doses for long periods. Whether the condition of the kidneys or an individual idiosyncrasy in regard to the drug is the determining factor in causing toxic symptoms requires further investigation, but it is an important fact that the great majority of persons taking boric acid or borax do so without injurious effects." Gowers,[2] Liveing, Féré,[3] and others recorded that in several epileptic cases undergoing a course of treatment with boric acid or borax for a long period in some cases there were considerable gastro-intestinal irritation, nausea, and vomiting; they also noted the occurrence of a dry condition of the skin and mucous membranes, falling out of hair, striation of the nails, psoriasis, erythema, a special papular eruption, desquamation, petechiæ, œdema of the extremities, albuminuria, debility, and anæmia. The doses in these cases amounted to from four to 10 grammes a day (about from 60 to 160 grains). Wild and Hall[4] record also several cases with similar symptoms which had been treated with doses of boric acid, or a mixture of that acid and borax, amounting only to from 30 to 75 grains daily. Doses of 80 grains per day for a single day produced no effect on 40 of Wild's cases, but doses amounting to 120 grains in four hours produced in Wild himself nausea, colic, diarrhœa, headache, depression, loss of appetite, and flushing of the skin. The only direct evidence of injurious effects being produced by the ingestion of "preserved milk" is obtained from the cases recorded by Dr. M. K. Robinson[5] the medical officer of health of the East Kent Combined Sanitary District. Five of the seven inmates of a certain house became suddenly ill after partaking of blanc-mange which had been made from milk of the previous day, to which, as was confessed, the dairyman supplying it had already added boric acid and to which the cook had added a further quantity to preserve it over-night. Nine fowls fed liberally with the blanc-mange became ill, five dying.

Extent of the use of boric acid, &c.—Dr. A. Hill's[6] paper read before the Society of Medical Officers of Health furnishes valuable statistics from Birmingham. Out of 2300 samples of food, 460, or 20 per cent., contained either boric acid, formol, or salicylic acid. Boric acid was found in 35 per cent. of 882 samples of butter and margarine, and in 15 of 24 samples of bacon, sausage, and other animal foods. In 5 per cent. of 1360 samples of milk boric acid was contained in quantities varying from three to 130 grains per gallon. The samples of butter analysed contained boric acid varying in quantities from seven to 84 grains per pound, or from 0·1 per cent. to 1·2 per cent. Five out of eight samples of cream contained boric acid. Several prosecutions in different towns of England are recorded of cases in which similar quantities of boric acid have been used.

Action of boric acid.—Professor Allen,[7] professor of physiology in Mason College, Birmingham, stated: "Boric acid and its compounds are quite foreign to the animal body and their presence must necessitate departure from the normal chemistry of life. The departure may be expected to consist partly in the formation of inert compounds of boric acid with calcium and magnesium (perhaps also iron), and the consequent removal of these indispensable metals from the economy. Whatever antiseptic may be used it should be remembered that in order to obtain its due effect there must be enough present to exert a decided influence on protoplasmic activity. This effect can hardly be expected to be beneficial to the tissues of the alimentary canal. Even the disinfection of the contents of the canal is a doubtful blessing in most cases, because the beneficial organisms are thereby destroyed. However harmless an occasional dose of boric acid (or one of its compounds) may be, it is evident that the case may be different when nearly every article of diet contains it."

The most systematic and complete experiments as to the action of boric acid and borax on the digestive ferments are those of Rideal and Foulerton.[8] They used a mixture of boric acid (25 per cent.) and borax (75 per cent.). The following are abstracts of their results.

A.—ACTION ON AMYLOLYTIC DIGESTION.

1.—*Salivary Digestion of Starch.*

Preservative.	Strength.	Retarding effect of preservative.
Boric mixture	1 in 2000	11·7 per cent.
,,	1 ,, 1000	12·2 ,, ,,
,,	1 ,, 333	14·0 ,, ,,

The retarding effect was measured by the amount of sugar formed as compared with a control sample containing no preservative.

[1] THE LANCET, Jan. 7th, 1899, p. 23.
[2] THE LANCET, Sept. 24th, 1881, p. 546.
[3] THE LANCET, Oct. 12th, 1895, p. 932.
[4] THE LANCET, Jan. 28th, 1899, p. 261.
[5] Public Health, August, 1899.
[6] Ibid., May, 1899.
[7] Report of THE LANCET Sanitary Commission on the Use of Antiseptics in Food, THE LANCET, Jan. 2nd, 1897, p. 58.
[8] Public Health, May, 1899.

2.—Digestion of Starch.

Preservative.	Amount.	Retarding effect on action of		
		Zymine.	Pancreatine.	Liquid taka diastase.
Boric acid mixture	1 in 2000	22·8 per cent.	36·0 per cent.	67 per cent.
,,	1 ,, 1000	37·0 ,, ,,	46·4 ,, ,,	73 ,, ,,
,,	1 ,, 333	49·2 ,, ,,	53·0 ,, ,,	80 ,, ,,

B.—PROTEOLYTIC DIGESTION.

1.—Pepsin digestion of raw beefsteak.

Preservative.	Amount.	Method of experiment.	N. dissolved.
Nil.	—	Digested for one hour.	46·8 per cent.
Boric acid mixture.	1 in 2000	Preservative and steak in contact for 24 hours before adding pepsin and acid.	45·5 ,,
,, ,,	1 ,, 1000	,, ,,	42·2 ,,
,, ,,	1 ,, 333	,, ,,	34·6 ,,
,, ,,	1 ,, 1000	Digested for one hour.	50·7 ,,

2.—Pancreatic digestion.

Preservative.	Amount.	Method of experiment.	Retarding action.
Boric acid mixture.	1 in 2000	Preservative in contact 20 hours before digestion.	0·6 per cent.
,, ,,	1 ,, 1000	,, ,,	2·7 ,,
,, ,,	1 ,, 333	,, ,,	2·4 ,,
,, ,,	1 ,, 1000	Without previous contact.	1·0 ,,

C.—INFLUENCE OF CURDLING OF MILK BY CHYMOSIN (RENNET FERMENT).

Very little influence was noted except that the borated samples showed more tendency to separate and that the curd was slightly more solid.

Several other investigators—Cripps,[9] Liffman,[10] and others—have obtained results differing in a very few details from these. The figures show that boric acid and borax have a detrimental action on all the digestive ferments to the extent of from 0·6 to 53 per cent., according to the amount used and the nature of the ferment action.

Experiments on animals.—Neumann[11] recorded the earliest experiments on animals. Dogs (in weight about 15 kilogrammes) received from five to six grammes of boric acid without effect beyond a fall of temperature. Larger doses produced vomiting and diarrhœa. Doses of 10 grammes and over produced death by nerve and muscle paralysis. Rabbits, pigs, horses, and fowls gave similar results. Chittender and Gies[12] experimented with full-grown dogs (in weight from eight to 12 kilogrammes) which were dosed during a period of from 27 to 46 days with borax and boric acid. They found that moderate doses of borax up to five grammes daily were without influence on metabolism or on general nutrition, while in doses of from five to 10 grammes daily borax disturbs metabolism, increasing excretion of nitrogen and of sulphuric and phosphoric acids through the urine. Boric acid up to three grammes had no effect. Still larger doses of borax or of boric acid disturbed the assimilation of proteids and fats, increasing the amount of fæces and of their nitrogen and fat. Diarrhœa and an increase of mucous secretion were also produced. Thus all experimental work on the subject has been performed on adult animals. No records of experiments with young animals have, as far as I can ascertain, been published. Many have stated that the quantities of boric acid used as preservatives are injurious to infants, without producing direct evidence to that effect. It has been often pointed out that the average quantities present in "preserved" milks is more than the ordinary maximum British Pharmacopœia dose for an infant taking from 32 to 40 ounces of milk per diem.

Most authors[13] are agreed that not less than 35 grains per gallon (0·05 per cent.) of a mixture of boric acid and borax is a minimum efficient quantity necessary to "preserve" milk for 48 hours, while this quantity is rather more than sufficient for a period of 24 hours. In order to obtain some better indications of the probable action of boric acid on young infants and children I arranged a number of experiments on young kittens, three or four weeks old, just able to lap milk. Their condition at this age seemed more analogous to that of infants than in the case of most other animals, as they are entirely dependent on milk for their food until they reach the age of about two months. The experiments were made with boric acid—quantities of 40 grains and 80 grains per gallon being employed. Judging from the experiments of Chittender and Gies on adult dogs, boric acid seems to have a less deleterious effect than borax. The experiments were only preliminary and a further series, with less quantities of acid, are in progress. The animals were kept under the most favourable circumstances, being allowed during the greater part of the day to run about within a considerable area and at night they were housed in capacious cages in the animal house at the laboratory. A supply of fresh milk, renewed every few hours during the day, was always provided. As the animals grew older a little bread was added and later a little meat was also given. The results were very striking, as the following tables show.

A.—FIVE KITTENS TREATED WITH MILK PRESERVED BY BORIC ACID IN QUANTITY OF 80 GRAINS TO THE GALLON.

No.	Original weight.	Weight at end of			
		First week.	Second week.	Third week.	Fourth week.
1	388 grammes	410 grammes	387 grammes	313 grammes	Dead.
2	497 ,,	490 ,,	500 ,,	423 ,,	,,
3	468 ,,	402 ,,	385 ,,	328 ,,	,,
4	468 ,,	472 ,,	420 ,,	438 ,,	,,
5	342 ,,	327 ,,	331 ,,	332 ,,	,,

B.—KITTENS DOSED WITH MILK CONTAINING 40 GRAINS TO THE GALLON.

No.	Original weight.	Weight at end of			
		First week.	Second week	Third week.	Fourth week.
1	442 grammes	395 grammes	340 grammes	330 grammes	Dead
2	345 ,,	335 ,,	308 ,,	Dead	—
3	268 ,,	253 ,,	215 ,,	,,	—
4	540 ,,	482 ,,	488 ,,	500 grammes	Dead
5	495 ,,	462 ,,	440 ,,	502 ,,	,,

C.—KITTENS RECEIVING UNTREATED MILK.

No.	Original weight.	Weight at end of				
		First week.	Second week.	Third week.	Fourth week.	Fifth week.
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
1	457	486	443	500	492	500
2	354	446	452	515	505	603
3	485	562	686	732	865	853
4	264	265	300	362	—*	—
5	313	320	333	340	384	441

* Strayed and lost.

It was endeavoured to have kittens of as nearly as possible about the same weight and of the same age and born of the same cat in each of the groups A, B, and C, so that the conditions might be approximately the same. The earliest symptom manifested by the kittens of Groups A and B was loss of appetite; it was seen even after the first day or two that they took less milk than the control

[9] The Analyst, 1897, p. 184. [10] Ibid., p. 102.
[11] Archiv für Experimentelle Pathologie und Pharmacologie, 1881.
[12] American Journal of Physiology, vol. i., 1898, No. 1.
[13] Rideal and Foulerton: Public Health, May, 1899, p. 534.

kittens. Diarrhœa, inactivity, and depression soon followed, then rapid emaciation and death. It is very evident from these experiments that much smaller quantities than 40 grains to the gallon would have considerable effect and experiments to test this are in progress. The results, I think, of these experiments cannot fail to lead us to infer that similar if not more injurious effects would be produced by repeated administration of similarly "preserved" milk as the daily food of young infants, and all the evidence tends to prove that milk, especially during the summer months, is habitually and systematically "doctored."

The use of formalin.—Formalin has only been introduced commercially within the last two or three years. It has been but little used in medicine except as a diluted vapour in the treatment of phthisis and whooping-cough, and no exact dosage has been assigned to it. Formol, formal, and formalin are terms in use for the commercial liquid which contains about 40 per cent. of pure formaldehyde (CHOH). The extent of its use as a milk preservative is seen from Dr. Hill's figures. Dr. Hill found formalin in 47 out of 1000 samples of milk examined. In some American cities its use had become so extensive that the sanitary authorities[14] provided each milk inspector with a small chemical outfit, consisting of ferric chloride solution, sulphuric acid, pipettes, and test-tubes, in order to test for formalin. After the passing of an Act in 1895 prohibiting the addition of any preservative to milk the open use of formalin ceased, but substitutes were presented for patronage under various names, such as "freezine," "milk sweet," "callerine," &c., which were found to be preparations of formalin. Costly circulars, booklets, and pamphlets were largely distributed to milkmen extolling the merits of the various preparations. The use of these was often described as "a new process for keeping milk and cream sweet *without ice*." The user was assured by the circulars that "it cannot be detected when used—in fact, a chemist could not find any trace of it if the milk were analysed." The medical officer of health of Philadelphia describes its use "as wholly mercenary, regardless of the injurious effects upon the digestion, especially of children and invalids." Cassal[15] gives his opinion that "formic aldehyde is a substance which must be regarded as even more objectionable than boracic acid."

Action of formalin on digestive ferments.—Rideal and Foulerton extended their experiments also to the action of formalin with the following abstracted results:—

A.—AMYLOLYTIC DIGESTION.

1.—Salivary Digestion of Starch.

Strength of formalin.	Retarding effect.
1 in 100,000	0·2 per cent.
1 ,, 50,000	4·0 ,,
1 ,, 10,000	11·0 ,,

2.—Digestion of Starch.

Strength of formalin.	Retarding action on		
	Zymine.	Pancreatine.	Liquid taka diastase.
1 in 100,000	3·6 per cent.	13·0 per cent.	5·0 per cent.
1 ,, 50,000	8·2 ,,	16·0 ,,	8·5 ,,
1 ,, 10,000	8·5 ,,	16·7 ,,	13·0 ,,

B.—PROTEOLYTIC DIGESTION.

1.—Pepsin Digestion of Raw Beefsteak.

Strength.	Retarding action.
1 in 50,000	2·6 per cent.
1 ,, 100,000, after 24 hours' previous contact.	3·6 ,,
1 ,, 50,000 ,, ,, ,,	3·7 ,,
1 ,, 10,000 ,, ,, ,,	12·6 ,,

[14] Annual Report of the Bureau of Health, Philadelphia, 1898.
[15] Public Health, 1899, p. 535.

2.—Pancreatic Digestion: Digestion of Casein.

Strength.	Retarding action.
1 in 50,000	0·3 per cent.
1 ,, 100,000, after 20 hours' previous contact with preservative.	5·4 ,,
1 ,, 50,000 ,, ,, ,,	5·9 ,,
1 ,, 10,000 ,, ,, ,,	8·6 ,,

Thus formalin in strengths of from 1 in 50,000 to 1 in 10,000 appears to have a deleterious effect on the digestive ferments to an extent varying from 0·2 per cent. up to 18 per cent., so that it is possible that the total effect of formalin after acting on the different digestive ferments on its way through the alimentary tract might amount to a very considerable total. Rideal and Foulerton[16] from experiments to ascertain the "preserving" effect of formalin on milk from a bacteriological point of view decided that not less than 1 part in 50,000 is necessary to preserve milk for 48 hours. There is but little doubt that milk, after passing through the hands of the wholesale purveyor, dairyman, and milkman, often contains considerably more than this quantity.

Experiments on animals.—The only recorded experiments are those of Rideal and Foulerton on three cats, one rabbit, and two guinea-pigs. The cats, which were three months old, and the guinea-pigs, which were over 200 grammes in weight, were not in such a condition as to furnish the best indication of the action of formalin. No effect was noticed after a course extending over some weeks. I therefore arranged a large number of experiments on young kittens, three or four weeks old, kept under conditions similar to those in the experiments with boric acid. The results are noted in the following tables.

A.—KITTENS RECEIVING FORMALDEHYDE ONE PART IN 50,000 OF MILK.

No.	Original weight.	Weight at end of						
		First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.	Seventh week.
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
1	273	271	305	336	399	—*	—	—
2	279	275	285	326	370	434	463	—
3	465	447	409	—*	—	—	—	—
4	425	420	445	438	410	537	646	690
5	315	303	290	367	331	—*	—	—

* Dead.

CONTROL KITTENS RECEIVING UNTREATED MILK.

No.	Original weight.	Weight at end of					
		First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.
	Grms.	Grms.	Grms	Grms.	Grms.	Grms.	Grms.
6	315	320	333	340	384	441	—
7	425	486	450	583	680	744	836
8	430	380	358	445	547	609	—
9	432	473	478	538	672	731	—

B.—KITTENS RECEIVING FORMALIN ONE PART IN 25,000 of MILK.

No.	Original weight.	Weight at end of					
		First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
1	408	416	518	510	537	558	583
2	405	485	568	567	612	630	585
3	539	565	717	692	706	700	
4	537	575	695	727	764	760	793

[16] Loc. cit.

CONTROL KITTENS RECEIVING UNTREATED MILK.

No.	Original weight.	Weight at end of First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
5	544	615	756	830	955	900	883
6	424	509	633	627	682	635	639
7	485	562	686	732	865	853	868

C.—KITTENS RECEIVING FORMALIN ONE PART IN 12,500 OF MILK.

No.	Original weight.	Weight at end of First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
1	483	535	543	465	—*	—	—
2	470	498	505	468	—*	—	—
3	550	556	566	525	445	487	514
4	389	435	470	485	540	580	—
5	395	365	401	462	497	581	—

* Dead.

CONTROL KITTENS RECEIVING NO FORMALIN.

No.	Original weight.	Weight at end of First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
6	544	615	756	830	955	900	—
7	354	446	452	515	505	603	726
8	408	385	433	538	672	731	—

The following tables show the average weekly increase:—

Kittens A.	Grms.	*Control Kittens.*	Grms.
1st week, average of 5 kittens	− 8·2	Average of 4 kittens	+ 14·7
2nd ,, ,, ,, ,,	+ 3·6	,, ,, ,,	− 10·0
3rd ,, ,, ,, ,,	+ 28·4	,, ,, ,,	+ 89·2
4th ,, ,, 4 ,,	+ 8·6	,, ,, ,,	+ 96·7
5th ,, ,, 2 ,,	+ 145·2	,, ,, ,,	+ 60·5
Average total increase for 5 weeks	177·6		251·1

Kittens B.	Grms.	*Control Kittens.*	Grms.
1st week, average of 4 kittens	+ 38·0	Average of 3 kittens	+ 77·6
2nd ,, ,, ,, ,,	+ 114·2	,, ,, ,,	+ 129·6
3rd ,, ,, ,, ,,	− 0·5	,, ,, ,,	+ 61·3
4th ,, ,, ,, ,,	+ 30·5	,, ,, ,,	+ 104·6
5th ,, ,, ,, ,,	+ 7·2	,, ,, ,,	− 38·0
6th ,, ,, ,, ,,	+ 7·2	,, ,, ,,	+ 0·6
Average total increase for 6 weeks	196·6		325·7

Kittens C.	Grms.	*Control Kittens.*	Grms.
1st week, average of 5 kittens	+ 20·4	Average of 3 kittens	46·6
2nd ,, ,, ,, ,,	+ 25·4	,, ,, ,,	68·3
3rd ,, ,, ,, ,,	− 18·0	,, ,, ,,	80·6
4th ,, ,, 3 ,,	+ 13·3	,, ,, ,,	83·0
5th ,, ,, 3 ,,	+ 55·3	,, ,, ,,	34·0
Average total increase for 5 weeks	96·4		312·5

The earliest effect of the formalin was to cause a loss of appetite during the first week. Diarrhœa with noisy gaseous motions, gaseous distension of the abdomen, and changes in the fur (the hairs standing and feeling rough and unpleasant to the touch) followed. In some cases emaciation and death occurred; in others the condition continued with but little increase in weight until the animals reached the age of about two months. The younger the animals the more susceptible they proved to the action of formalin. Compared with the control animals it is seen that the formalin in Group A (1 in 50,000) retarded the nutrition of the animals, as indicated by their increase in weight, to the extent of about 29·3 per cent., in Group B (1 in 25,000) to 39·6 per cent., and in Group C (1 in 12,500) to 69·1 per cent. It is evident from a study of the figures that experiments should be continued on a larger number of animals to avoid the very material effect which one animal in five may cause on the average.

From a consideration of the results of the above tests—chemically of the effect of boric acid and formalin on the different digestive ferments, and physiologically of the effect of these re-agents on the nutrition of young kittens—one is forced to conclude that these chemicals when used as preservatives of milk (and probably of other foods) are very injurious to the health of the consumer and particularly so to the health of young infants. Further, it is easy to conceive that the great infant mortality-rate from diarrhœa of many of our large towns may be closely connected with the practice, especially during the summer months, of systematically "doctoring" milk by means of the preservatives used by milk-purveyors, dairymen, and milkmen. These experiments on young animals will constitute the first of a large series by which "that sufficient information" as to the injurious effects of the use of preservatives in milk will be provided in order to make an action under the Sale of Foods and Drugs Act possible.

A CASE OF PYO-PNEUMOTHORAX FROM PERFORATION OF GASTRIC ULCER.

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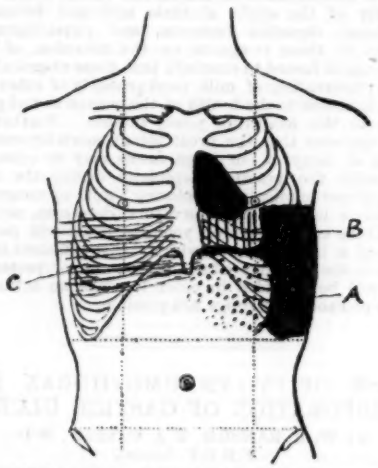
THE patient, a single woman, aged 20 years, when first seen was apparently in the last stage of phthisis, from which disease, indeed, she was supposed to be suffering. Inquiry, however, elicited the fact that for a couple of years she had suffered from pain after food, with occasional vomiting, and that some months previously she had vomited dark blood. Six weeks previously to being seen, while she was shelling peas, the patient was suddenly seized with stabbing pains in the left axilla shooting across the stomach. Since then she had kept her bed, had had frequent vomiting of food and bile, and had coughed up phlegm of an unpleasant taste and odour to the extent, it was said, of half a pint in the 24 hours.

Examination showed extreme emaciation and an anæmic dry skin. The abdomen was flat, not very tender, and the stomach resonance mounted high near the heart. In the chest the resonance at the apices was poor, but there were no crepitations or bronchial breathing there. There was dulness only in the hinder and lowest part of the left axilla, over the greater part of which the note was subtympanitic. In the lower two-thirds of the left axilla and at the left base were amphoric breathing and metallic tinkling. There was no succussion splash. The diagnosis being made of pneumothorax from perforating gastric ulcer the patient was advised to come into hospital, but she only did so a week later.

On admission (Sept. 26th, 1898) the abdomen was found to be flat and did not expand well during inspiration in its left half. There was some tenderness on deep pressure in the left hypochondriac and lumbar regions. On the front of the chest there was fair resonance under both clavicles and the breath sounds were normal. The cardiac dulness reached from the fourth space up to the lower edge of the second rib (see diagram); below this was a high-pitched tubular note extending outwards to just outside the nipple line and downwards for two inches. Below this there was stomach resonance. Outside the nipple line and in the axilla, below the nipple level, was an area of absolute dulness which was continued posteriorly at the same level to within two inches of the spine. Over the greater part of this dull area both breath and voice sounds were absent; only at its upper

margin were there distant bronchial breathing and ægophony. It was thus evident that a large amount of fluid had accumulated in the chest during the seven days' interval between the two examinations. A needle inserted near the angle of the left scapula withdrew some fœtid pus. On Sept. 29th the patient was anæsthetised with A.C.E. mixture and two inches of the seventh left rib were excised near the angle of the scapula. Only a little gas escaped at first, the lung being slightly adherent to the chest wall, but on the finger being introduced in an upward and forward direction about four ounces of fœtid pus escaped. The cavity was plugged with iodoform gauze. Hypodermic injections of morphia



A. The dotted area gave a stomach note. B, The area covered with vertical lines gave the high-pitched note of pneumothorax. C, The area covered with horizontal lines gave liver dulness. The black area shows the dulness due to empyema.

were ordered to check the cough and relieve the pain and food was given solely by enemata. Some hours after the operation considerable dyspnœa set in and the patient coughed up some blood-stained mucus. The same evening the temperature rose to 103·8° F., having in the three previous days not exceeded 100°. On Sept. 30th the patient was rather better, though she was coughing up beside muco-pus some gastric juice and bile, and numerous coarse crepitations were audible all over the front of the left lung. The gauze plugs had to be frequently renewed, being soaked with discharge which was, however, much less offensive.

By Oct. 2nd further improvement had occurred, the pus of the discharge being replaced by a yellowish inoffensive fluid presenting the characteristics of gastric juice. The coughing up of stomach contents was now prevented by propping the patient in the upright position, so that the hole in the stomach should be above the level of the fluid therein. On this day some of Carnrick's liquid peptonoids and also salicylate of bismuth were given by the mouth. On Oct. 9th the note says: "Further improvement, temperature keeps lower; no gastric contents seen in the phlegm or in the discharge from the sinus; patient has vomited once since the last note. The discharge is much less offensive and is diminishing. The sinus has been treated with iodoform emulsion. The apex of the left lung is clearing up, but a few crepitations are heard at the right base."

On Oct. 11th the left front of the chest showed no dulness and normal breath sounds and on the left back resonance and breath sounds were much improved and moist sounds were fewer. The patient's general condition now, however, began to change for the worse. The temperature that night rose to 101°, vomiting re-commenced, and the signs of pneumonia at the right base became more marked. Three days later dulness, bronchial breathing, and coarse crepitations had spread over the lower half of the right lung and on the 18th she died. The improved condition of the left lung remained, however, to the end.

Necropsy.—On opening the abdomen the stomach was found to be distended and adherent to the liver, diaphragm, and spleen. When the chest was opened the left side of the diaphragm with the stomach adherent was seen to mount as high as the third intercostal space. The left lung was attached by firm adhesions to the chest wall and the sinus was found to lead into a healthy granulating cavity. The left lung, though somewhat contracted, was free from pneumonia, suppuration, or tubercle, and was obviously in a fair way to recovery. There was no visible opening from the diaphragm to the stomach. The right pleural cavity, on the other hand, contained a little semi-purulent fluid and the lower half of the right lung was covered with lymph and infiltrated with grey pneumonia. When the stomach was opened an indurated ulcer was found on the hinder wall near the cardiac end, firmly adherent to the diaphragm. In the middle of this was a small perforation closed by recent lymph. The spleen was adherent to the stomach and its inner surface was covered with a layer of pus. The upper surface of the liver was also bathed in thick green pus which extended to the right side and appeared to be infiltrating the right half of the diaphragm.

It was clear that the infection, which had spread from the ulcer to the left pleural cavity, was practically cured by the treatment adopted, but that the sub-phrenic suppuration had remained and had caused death by extension over the liver through the diaphragm to the right lung. The experience of operators for perforating gastric ulcer points to the importance of a thorough cleansing of the upper surface of the liver at the time of operation. I remember one case of successful closure of the ulcer in which the patient died six weeks later from septic pneumonia of the right lung caused by a supra-hepatic collection of pus. In the present instance, however, the patient's strength would not have allowed a laparotomy and suture of the ulcer adhering to the diaphragm. From the firmness and extent of the adhesions it would only have been possible to treat the case by excision of a very considerable piece of the stomach wall. This, with the subsequent suturing of the stomach wall and cleansing of adjacent organs, would have formed a lengthy operation which the patient could not have survived either before or after the opening of the empyema. Possibly, if the case had been diagnosed within a week of the rupture of the ulcer into the chest, treatment by operation from below the diaphragm, followed by drainage of the pleural cavity, might have been successful. Gastric ulcer adherent to the vault of the diaphragm will, however, probably be always the least accessible to the surgeon, and it is fortunate that in most instances the adhesions themselves limit the disease and effect a cure.

The chief diagnostic question in this case was as to whether the collection of pus and gas was above or below the diaphragm—whether we had to deal with a true pneumothorax or with the "pyo-pneumothorax subphrenicus" of Leyden. The distinction between the two is often not easy, as even amphoric breathing has been met with in the subphrenic affection. The amount of cough and phlegm, however, pointed to intra-thoracic disease and the want of mobility in the left half of the diaphragm pointed in the same direction, as that muscle is said to usually contract well when a collection of gas and pus lies below its arch. The displacement of the heart in this case was, I think, hardly sufficient to form a decided criterion, and perhaps the diagnosis, though it proved to be correct, was when made only a probable one.

Nottingham.

A CASE OF

HÆMORRHAGIC ASCITES WITH VERY GRAVE SYMPTOMS; RECOVERY AFTER PARACENTESIS.

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IN THE LANCET of Oct. 14th, 1899, there is an annotation on "Primary Hæmorrhagic Effusions into the Pleuræ and Peritoneum" which has reminded me of the case that follows, one of sufficient rarity to be worthy of record.

A man, aged 27 years, was admitted to the Glasgow Royal Infirmary on June 15th, 1896, complaining of swelling of the legs and of the abdomen. Up to 11 weeks before admission he had considered himself perfectly well. At that time he began to suffer from pain in the epigastric region, slight headache, and vomiting of bile,

the pain and vomiting lasting only for about a week. There was no shivering, but he admitted having had a slight feeling of chilliness, not followed by any subjective sensations of fever. About the end of the first week of illness pain and tenderness developed in the small of the back, from which it passed round to the front of the abdomen, and from that date he had had slight abdominal swelling. At that time he noticed nothing abnormal about his urine in quality or quantity. After a few weeks he returned to work but had to give it up in a day or two and had never been able to resume it. Three weeks prior to admission the abdominal swelling became very great and on June 11th he noticed his legs greatly swollen. About five weeks earlier he had observed his urine to be scanty and high-coloured. He had never had an illness of this kind before, or, indeed, any kind of illness that he knew of. He had never had hæmorrhage from the stomach or from the bowels. During his illness he had lost his appetite and the bowels had shown a tendency to diarrhœa.

The patient, a very tall, big-boned man, who on admission weighed in his clothing 13 st. 11 lb., asserted that he had lost flesh, but he did not look emaciated. The tongue was fairly clean and moist. There was no jaundice. The feet and legs were considerably œdematous. The urine was high-coloured, acid, of specific gravity 1033, with a copious red deposit of urates; it contained no albumin, blood, or sugar; in the sediment there were some oxalate of lime crystals as well as the urates. On physical examination all the signs of an extensive accumulation of free fluid in the peritoneal cavity were obtained. It was so extensive that in the dorsal decubitus a tympanitic note was obtained only in the umbilical region, all the rest of the abdomen being very dull. It had displaced the heart and the liver upwards, the apex of the former beating in the fourth intercostal space, while the apparent upper border of the dulness of the latter was at the level of the right nipple. Owing to the ascitic accumulation it was impossible to form any opinion as to the size of the liver or of the spleen; neither could be felt. In the erect posture dulness was discovered to extend from the base of the lungs almost as far up as the angle of the scapula and on the left side this dulness passed round to join the cardiac dulness. Over the pulmonary dull area the respiratory murmur was very weak. There was no evidence of cardiac disease.

The facts above noted led to a diagnosis of cirrhosis of the liver and inquiry elicited the information that the patient had been a very heavy drinker and often took considerable quantities of whisky even before breakfast. As the abdominal swelling was increasing (39 inches at the umbilicus) and causing him great distress from the upward pressure on the thoracic organs, on June 22nd a trocar and cannula were introduced and 154 ounces of fluid were removed which afforded considerable relief. The fluid was like porter in colour and was so evidently hæmorrhagic that no attempt was made to empty the peritoneal cavity lest the diminished pressure might lead to fresh hæmorrhage. The fluid was faintly alkaline, did not coagulate on standing, contained large numbers of blood corpuscles, and became almost solid on boiling. Though temporarily relieved by the removal of the fluid the patient was losing ground, frequently suffering from sickness, vomiting, and pain in the abdomen, and rapidly growing emaciated. The pressure symptoms becoming aggravated he was again tapped on July 10th and 67 ounces of the same sort of fluid were withdrawn, with some relief, the amount evacuated being limited for the reason above stated. Diuretic treatment was employed, as the quantity of urine was extremely scanty, often scarcely 10 ounces per day, but without result. Owing to sickness he was unable to take a sufficient quantity of nourishment and he slept very badly. For a few days his temperature was about 101° F. Emaciation became so extreme that the facies Hippocratica was marked and he had all the aspect of a dying man. On July 19th, while at stool, he had a severe and sudden attack of syncope, from which he was not expected to recover. From the latter date he ceased to get worse and in the end of July it was noted that he was improving and that sickness had ceased for some time. His further history is one of uninterrupted progress. By the end of August he was able to get out to the open air and on Oct. 8th he was dismissed practically well.

It is impossible to say how much weight this patient had lost when at his worst, but when he had regained sufficient flesh and strength to be able to go to the weighing-room, on August 29th, he scaled only 10 st. 10 lb. On Sept. 26th he weighed 12 st. 1 lb. When dismissed he measured at the umbilicus 31 inches; there were no signs of fluid in his abdomen; there was no longer any dulness at the bases of the lungs, but the respiratory murmur was slightly defective there; the heart was in its normal situation and the urine was practically normal in quantity and quality. After neither of the tappings could the liver or the spleen be felt within the reach of the hand. As the abdomen diminished in size it became possible to demarcate these organs by percussion, and when he left the hospital the splenic dulness was not enlarged, while the hepatic measured four inches in the nipple line and three in the middle line (the upper border being normal in position), probably a small dulness for a man of his size. In addition to the tapping and diuretics the only treatment had been careful nursing and the administration of four ounces of whisky daily from July 12th to August 25th.

Throughout the patient's residence in the hospital the temperatures were mainly normal or subnormal, but on a few occasions they rose to 101°—once towards the end of June and again in the second week of July. Thereafter they were always practically normal. From the time that improvement became quite decided—i.e., from early in August—the urine became more abundant, reaching the normal quantity and ultimately slightly exceeding that amount. Since leaving the hospital he has been hard at work and now (October, 1899) he states that he "never was better in his life." I understand that he has given up his drinking habits, rarely taking alcohol in any form.

Hæmorrhagic effusion into the peritoneal cavity is so commonly due to malignant disease of the peritoneum that after the tapping I could not but suspect the existence of that disease, especially as the patient was rapidly wasting and as he presented a most cachectic appearance. Tuberculous peritonitis was also before my mind, but various circumstances caused me to dismiss that as a highly improbable diagnosis. For several weeks, then, this man was regarded as suffering from a malignant disease and he was so ill that I was prepared any day to hear of his death. His ultimate recovery was a surprise to all who saw him and caused the diagnosis to be carefully reviewed. There can now be little doubt that he was suffering from cirrhosis of the liver complicated with hæmorrhagic ascites. In all likelihood there was some chronic peritonitis (as evidenced by abdominal pain and occasional rise of temperature) and the hæmorrhage probably occurred in association with it. That such a complication of cirrhosis may occur is a little known fact, for writers of text-books practically ignore it—e.g., neither Fagge nor Coats makes mention of it, while Osler dismisses it in a word. Besides being a complication of cirrhosis of the liver, however, hæmorrhagic effusion into the peritoneum may arise in drunkards from chronic peritonitis without hepatic disease, as was shown by Professor Leudet,[1] of Rouen. The complete recovery of my patient is apt to suggest that his may have been a case of this kind. Possibly those French writers who have described primary hæmorrhagic effusions might include my case among them, but that I am not disposed to do. Indeed, it is more than questionable whether hæmorrhagic effusions into serous cavities ever occur in a primary or idiopathic manner. If they do, then probably the case recorded by Dr. W. S. Cheesman and Dr. W. S. Ely, on which the annotation above referred to was founded, was one of the kind; whether or not, it was an extremely interesting and probably a unique case.

Glasgow.

A CASE OF MENINGITIS PRESENTING SOME PECULIARITIES.

BY R. S. BERRY, M.R.C.S. ENG., L.R.C.P. LOND.

THE record of the following case offers certain points which bear to some extent upon the problem which the cerebellum presents as to its functional relations with the brain and nervous system generally, and I venture to commit this account to paper in the hope that it may help to throw some light, however small, upon a subject as obscure, I believe, as it is interesting.

On Jan. 20th, 1899, I was called to see a child, aged two years, who was stated by his mother to have been ailing and

[1] Gazette Hebdomadaire, December, 1879.

feverish for some days. The child was a well-nourished and well-developed boy, the youngest of a family of six children, and was evidently in a very peevish and irritable condition. He lay in his mother's arms with his eyes turned from the light towards her body, his limbs flaccid, and the head drawn slightly backwards, and now and again it was rolled slowly from side to side, the movement being sometimes accompanied by a sudden cry. Nothing abnormal was to be found in the chest or the abdomen, the knee-jerks and cremasteric reflex were normal (the latter perhaps rather marked), and there was no ankle clonus. There was no strabismus, no retraction of the abdominal wall, and though light scratching with the finger-nail was followed by some reddening of the track this was not sufficiently vivid or lasting to warrant its interpretation as the *tache cérébrale*. From time to time the child ground his teeth (there were none "being cut") and according to the mother he had been vomiting intermittently for two or three days. The child's temperature was 101° F. and he was so obviously seriously ill that after considering the negative results of the examination of the chest and abdomen I felt justified in diagnosing meningitis and therefore gave a bad, but not entirely hopeless, prognosis. Upon my giving a name to the complaint the mother informed me that she feared such was the case as she had already lost one child from meningitis.

In general type the child conformed fairly to the usual description of individuals who may be expected to develop tuberculous lesions. His complexion was singularly fair and clear, the hair was long and silky, and the spine for the whole of its length was covered with a soft down such as may often be seen among children of this diathesis. The father had come to this colony a good many years ago on account of "threatened consumption," and the mother was a delicate-looking woman; these facts, together with the foregoing one of a previous child having died from meningitis, were all the family history I obtained. The child was ordered a dose of castor oil (there had been constipation since the onset), to have the hair cut short, and to have an ice-bag applied to the head. The cropping of the hair revealed a fact unmentioned by, because unknown to, the parents—namely, that on the right half of the scalp covering the occipital bone, extending from the external occipital protuberance downwards and outwards for rather more than two inches, there was an abrasion of the skin, evidently the result of a blow. No history of injury could be elicited, but in view of this it seemed justifiable to entertain the notion that the meningitis might be traumatic rather than tuberculous in origin and that a slightly more hopeful prognosis might therefore be given. From this day forward for four days all the symptoms deepened and certain new ones presented. The temperature was never found by me to be above 101°, but the head became more retracted, its lateral rolling became more constant and more ample in excursion, the vomiting increased in frequency, and limb movements of a remarkable character occurred. The child would lie motionless save for the almost ceaseless head-rolling, when suddenly the right limbs—never the left—would be flung simultaneously, violently, and as a whole abroad, the knee and elbow straight, the leg outwards as far as abduction could be carried, and the arm upwards and outwards until its invariable collision with the side of the head stopped its career. These movements had nothing suggestive of spasm about them and after a variable number of consecutive repetitions the limbs lay flaccid and untwitching in the extreme position into which they had been thrown and on replacement rested quietly until a renewed stimulus, like the sudden bursting of an energy storm, flung them flail-like into the extremes of abduction and uplifting respectively. And this was confined to the right limbs; the left were never so affected and at no time could any facial contortion, unilateral or otherwise, be observed. I had no means of examining the fundi oculorum; externally the irides reacted equally and fairly readily to light and there was no strabismus or lid paralysis.

On the fifth day from my first visit, the ninth or tenth since the onset, there was a further rise of temperature to 103° and the case as a whole entered a new phase. The breathing became rapid and shallow, the eye-lustre dulled, and constipation gave way to profuse diarrhœa. Two patches of dulness separated by a well-marked interval were to be found at the base of the right lung, one having its centre almost in the mid-axillary line, and the other being situated at the vertebral border of the lung; shrill tubular breathing could be heard over each and a pleuritic rub in addition over the mid-axillary patch. These areæ of dulness increased slowly in size from day to day, and *pari passu* with their increase the flail-like limb movements and the head-rolling became less and less in both force and frequency. The pneumonia crept slowly throughout the lung, the original patches coalesced, and mounting upwards the inflammation laid its hold upon the whole lung from base to apex, the dulness being at last completed all over the right chest, but by the time that it was complete at the apex there were some coarse crackles as of redux crepitation at the base. I was especially watchful for the appearance of the fluid in the pleura, but except for a pretty general rub at the height of the pneumonia that membrane developed nothing further, and the left lung remained absolutely untouched throughout. The child seemed desperately ill, and, with the exception of continually feeding him at short intervals with small quantities of beef juice and brandy-and-water, no medicinal treatment of any kind was carried out. Sordes appeared, becoming heaped up on the teeth, and the lips, especially at the angles of the mouth, became deeply fissured, the fissures being covered with an unhealthy greyish membrane, and the tongue being dry and coated with a fur of much the same appearance.

On the sixth night from the onset of the lung trouble the child looked almost moribund and I remained with him. The heart-beats were so running as to be uncountable and therefore two-minim doses of the tincture of digitalis were given every hour and a half with such brandy and beef juice as he could be induced to swallow. Between 3 A.M. and 4 A.M. the temperature dropped to 101° and by daylight it had dropped to 100°, but the child seemed to be coming to the end of his tether from exhaustion. He, however, retained all that was given him by the mouth and the digitalis and brandy were pushed in rather increased quantities. As the day wore on the breathing type improved and this and the pulse-frequency fell, and with these improvements began again the head-rolling and the flail-like movement in constant inverse ratio to the severity of the chest symptoms. He passed another disturbed night and the movements developed a new phase. The child would lie quiet for intervals varying from a few minutes to half an hour, when with a sudden twist of the whole body he would turn completely over in the bed, the axis of the twist being through the median longitudinal line, the twist being always in the same direction from right to left and the entire movement so quick that on coming to rest again the body was hardly at all removed from its previous position. I saw four consecutive twists on one occasion, the sum of the four removing the child from the middle to the side of an ordinary double bed. The retraction of the head had now returned and there was some hollowing of the abdominal wall, but nothing very striking, while the diarrhœa ceased and was replaced by constipation again.

For the following three or four days the amount of nourishment was increased and three-minim doses of the tincture of digitalis were given every six hours day and night, during which time the heart began to slow down and the lung to show signs of resolution throughout, and there was some abatement of the axial twistings and the retraction of the head. The abatement of the axial twistings took place in a definite manner, the character of the movement itself being retained, but the interval between the occurrences being prolonged more and more until one of some hours elapsed and then nothing further was seen of them, and the final subsidence of the flail-like movements of the right limbs ended the more gross muscular phenomena of the case.

While the period of axial movements was at its height and during its subsiding stage the child's mouth, which during the pneumonia had presented the usual sordes about the teeth, cracking of the lips, and, as I mentioned, a greyish unhealthy exudation about the tongue and oral angles, began to become generally inflamed, and stomatitis of a superficial ulcerative type became a leading feature of the case, for such was its extent and such was the general disturbance which it aroused in the already weakened child that feeding—the one hope upon which life appeared to hang—became a most difficult matter, owing hardly so much to the dread of the child at any attempt to feed him as to the actual stiffening and enlargement of the tongue, which kept that organ almost immobile. The condition was treated by continual swabbing of the whole mouth cavity with boric acid, each

swabbing being followed by running a teaspoonful of glycerine drop by drop over the tongue and gums, and after some days the ulceration assumed a more healthy look and slowly disappeared.

Such was the course of events, amounting briefly to a trauma of the cerebellar region of the skull, followed primarily by general meningitic symptoms and secondarily by a pneumonic (vaso-motor?) lesion, a lesion (trophic?) affecting the integrity of a large mucous surface, and motor disturbances of a peculiar character.

The first striking point with regard to the limb movements was their unilateral character, the side affected being the same as that involved in the superficial lesion and therefore presumably the side most touched by the consecutive meningitis. In detail of description the limb muscles throughout had nothing of rigidity lingering after their work was done, there was no duration to the efferent energy storm that flung the arm and leg abroad, and hence the cause that harboured the birth of those efferent currents must, from the symmetry of its results, have been a local and, from the intermittence of its action, at the same time a variable one. It was a good example of the essential symptomatic difference which holds between the lesions of which pressure is the outcome, according as the lesions exert their pressure by fluid or solid media—namely, that with the former the symptoms are always variable and intermittent and with the latter constant and continuous.

I believe that the limb movements and the axial rotations (differing only in degree from one another) were the result of abnormal variations of blood-pressure within the skull, such variations superadding their effect to that of the abnormal fluid within the skull, which as one meningitic result was making pressure upon the cerebellar (and possibly basal cerebral) cortex. And I believe that this abnormal variation of blood-pressure arose from disturbance probably of a functional nature of the vaso-motor centre in the medulla, for even as the resulting limb movements were pictures of a widely forced incoördination, so was the upraising of the blood-pressure that lent an extra fulness to the intracranial effusion the result of an incoördination of the usual rhythmic variations that flow from the medullary vaso-motor centre — an incoördination of the function of a centre causing (by way of its influence upon an alien phase of fluidity within the skull) the disturbance of cortex necessary to hurl widespread efferent currents to the peripheries and, subsiding, cured as it were by its own action, as the necessary extra outflow of blood to the limbs during the contractions drained the cranial vessels sufficiently to allow the intracranial pressure to sink below the point necessary for the production of such cortical irritation as would initiate those efferent currents. On such a view it is probable that the limb movements and the rotations were in a way a tertiary set of symptoms, the meningitic fluid acting first on the cerebellar cortex (and medullary cortex?) in such a manner as to interfere with the ordered function of the vaso-motor centre, the incoördination of that centre varying in degree with the variations of demand made upon it by the general bodily processes for a rise or fall in each in its particular area, producing the necessary conditions of excitation of the efferent currents; and finally the movements occurring as described.

Passing to the intercurrent pneumonia this in itself was peculiar, its entirely right-sided (the original side of lesion) limitation having perhaps the greatest interest when its probable causation is considered. Its mode of motion as it crept slowly but surely about the lung until it involved the whole organ was not of the common order of pneumonia, and its results, having pitted, as it were, its demands for extra vascularity against those of the inflamed meningeal area and outstripped the latter by the urgency of its demands, were such as by a process of auto-depletion to drain the original seat of lesion sufficiently to allow its integrity to be restored in such measure as to render recovery possible. I believe that this pneumonia was merely an expression of loss of vaso-motor control, that it was essentially a nervous lesion inhibiting the constrictor fibres *viâ* central disturbance, possibly associated with functional disorder among the trophic fibres, such as to impair the cells of the capillary vessel walls and thus allow abnormal blood leakage into the minute air-passages and so set up a pneumonia of direct irritation. Viewed generally, with regard to the case it was a secondary symptom, and its remarkable inverse ratio to the severity of the head symptoms stamps it as almost certainly the saving clause to the patient. Of the stomatitic lesion it may be said that its nervous origin as a trophic perversion originating in control disturbance of the fifth cranial nerve is a matter of high probability. The rapidity with which it lighted up and the completeness of its disappearance, the improvement being not patchy but as a whole, point certainly to a central rather than a local causation.

The great inference which may, I think, be fairly drawn from this case is that the cerebellar cortex is the government seat of coördination of much more than mere voluntary or involuntary muscular contraction. Its work would seem to lie mainly in the unravelling of the tangled skein of impulse that is flung within its boundaries as the hurried energies of the higher centres crowd down the outward ways of thought and action, to filter and direct the path of the multitude at the turnstiles that guard the portals of voluntary and involuntary action, and possibly to exercise a selective influence in turning away undesirable units from mingling with the working numbers. Between conscious and unconscious cerebration in the higher centres and their peripheral expression in action it stands as a balance, about which the finer relations of cause and effect are adjusted to orderliness, and once throw this balance out of gear and the profound modification of peripheral cell-life and work which results is the expression outwardly of the fact that the middleman has lost his hold upon the lever essential to the proper working of the whole machine. Upon the integrity of the lock gates to an irrigation system hangs the fate of countless millions of ultimate cell units; energy and nutrition alike are regulated in their quantity, and to some extent quality, by the soundness of their working, and through the cerebellar sluices must be poured, ordered and complete, the messages for work and nutrition that are the sum of the life of every individual body-cell. Injure the integrity of these lock gates and which of the bodily and mental processes shall be saved from the confusion of function that is disease itself?

I have purposely abstained from any discussion as to the possibility of semicircular canal involvement having any connexion with the axial twistings as I have seen no case of semicircular disease and the literature at my disposal is very limited.

Southport, South Queensland.

AN IMPROVED APPARATUS FOR WASHING OUT THE STOMACH.[1]

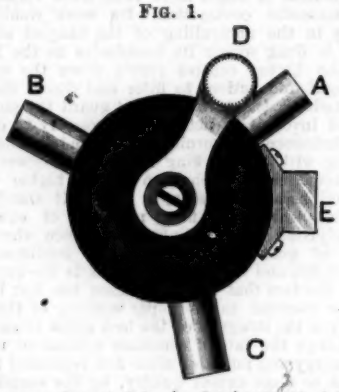
BY GEORGE HERSCHELL, M.D. LOND.

VARIOUS attempts have been made from time to time to improve upon the simple arrangement of funnel and tube which was devised by Somervail as far back as 1823, its great disadvantage being that syphonic action has to be started afresh after each introduction of fluid into the stomach. The most notable improvement was the Leube-Rosenthal apparatus, which was constructed in the following manner. The essential part of the apparatus was a glass Y-piece. One arm of this was connected with a rubber tube proceeding from a douche-can hung some little distance above the head of the patient. The second limb carried a tube which passed to a receptacle placed upon the floor and the remaining one was connected with the stomach-tube. Upon the first and second tubes were placed metal taps or clips by which the flow through them could be controlled. The apparatus was used in the following manner. The douche-can having been filled with water and the stomach-tube having been introduced into the patient the tap on the rubber tube proceeding from the douche-can was opened. Water thus passed into the stomach. Then, whilst the water was still passing, the tap on the tube to the receptacle was opened and the end of the stomach-tube was nipped with the fingers of the left hand. The stream was thus diverted into the tube passing to the receptacle on the floor. If the tap controlling the tube coming from the douche-can were now shut syphonic action would be established when the pressure on the stomach tube was relaxed and the stomach would empty itself. This apparatus is very admirable and in the hands of a practised operator gives the

[1] Exhibited in the Section of Pharmacology at the annual meeting of the British Medical Association held at Portsmouth in 1899.

best results. It is, however, too complicated for use in general practice, as almost the skill of a prestidigitator is required to properly manipulate the taps. Retaining the main features of the apparatus, I have attempted, and I hope with success, to provide a mechanism which will perform automatically the concerted movements necessary to work it. The most important part of my apparatus is a three-way tap of special construction which is substituted for the glass Y-piece. This is shown in Fig. 1, which is slightly smaller

FIG. 1.

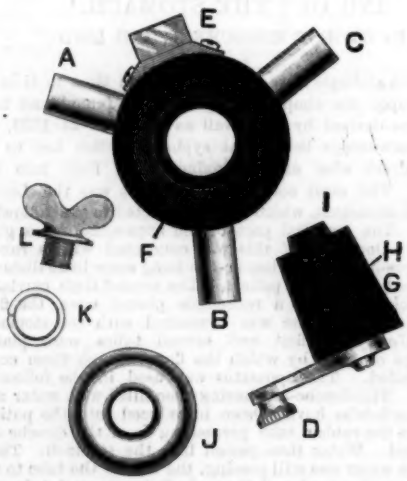


The three-way tap. A, tube for douche-can. B, tube for stomach-tube. C, tube leading to receptacle. D, tap. E, handle-socket.

than the original, the diameter of the actual tap being two inches and that of the tubes seven-eighths of an inch. The tap is seen to consist of a circular body of vulcanite carrying three tubes, A, B, and C, to be connected respectively with the douche-can, the stomach-tube, and the receptacle upon the floor. The tap is turned on and off by the handle D in the manner to be presently described. E is a socket screwed on to the side of the tap and is designed to receive the end of a jointed arm by which the tap can conveniently be held in a proper position with reference to the patient.

In Fig. 2 the tap is shown taken to pieces in order to

FIG. 2.



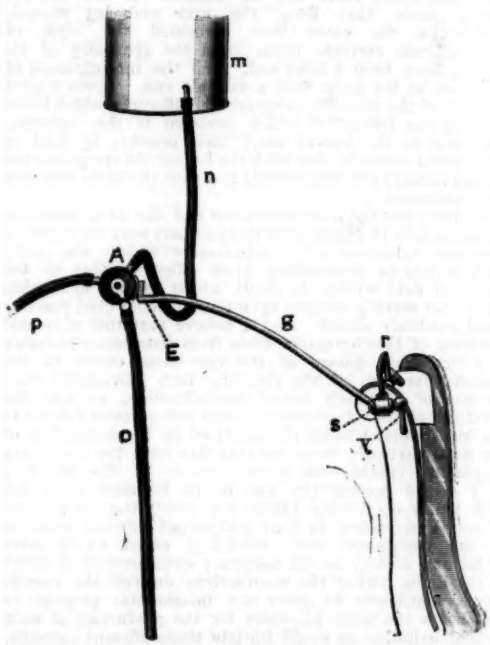
I, the shoulder. J, the washer and K, the split-ring, which fit on to I, and are fixed by L, the screw.

demonstrate its internal construction. The body of the tap is seen to consist of a ring of vulcanite F, carrying at equal distances the tubes A, B, and C. The moving part of the tap consists of a vulcanite plug G, carrying at one extremity the handle D by which rotation is communicated to it and at the other a shoulder I to project through the centre of the washer J. The plug G is conical and is perforated with holes in such a manner as to produce the results shown in Fig. 4.

In assembling the tap the centre G is first placed in the hollow body. The washer J is fitted upon the shoulder I. Over this is placed the split ring K, and finally the winged screw L entering the centre of the core keeps the whole in position. The split ring K is an essential part of the apparatus. It is constructed of steel spring in such a manner that its two portions stand away from each other. When compressed by the screw L it keeps the parts of the tap so well together that the joint is water-tight, at the same time allowing a very smooth and easy movement. After using the tap can be at once taken apart for sterilisation by unscrewing L. This screw is purposely made "winged" in order that it may be removed by hand without requiring the aid of any tool.

Fig. 3 shows how the apparatus is arranged when using it

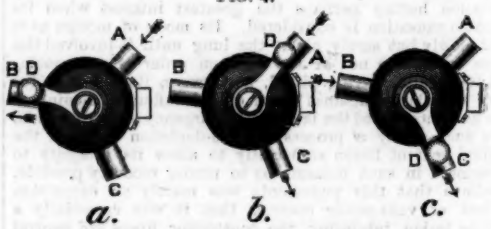
FIG. 3.



Apparatus in use. *g*, handle for fixing to chair back. *m*, the douche-can.

upon a patient. The tap is here shown at A with its three tubes connected up by rubber tubes to the douche-can *m*, to the stomach tube by the tube *p*, and to the pail by the tube *o*. The tap itself is attached by means of the socket E, already described, to an arm *g*, which is attached to the top of a chair by means of the clamp *r*. Movement in any direction is provided by a ball and socket joint *s*, which may be fixed by the screw *y*. This arm is found in practice to be

FIG. 4.



Showing entrance and exit in different positions of D.

a great advantage, as it holds the tap steady at a convenient point in front of the patient in such a manner that it can be manipulated with one hand, the other one being free to hold the stomach tube in position. Otherwise the tap would have to be held in one hand whilst it was manipulated with the other.

Fig. 4 shows the effect of rotation of the handle of the

tap upon the flow of liquid through it. When the handle D is in the position shown in (*a*) the flow is between the tubes A and B. When in the position shown at (*b*) between the tubes A and C. And when at (*c*) between B and C. Whence it follows that the tube A being connected with the douche-can, the tube B with the stomach tube, and the tube C with the pail or receptacle on the floor, when the handle is in the position (*a*), fluid will be passing from the douche-can into the stomach of the patient. When at (*b*) the stomach tube will be cut off, but will remain full of fluid and the water from the douche-can will be passing down and filling the tube C which leads to the pail. If now the handle is moved into the third position as shown at (*c*) the douche-can will be cut off and the stomach tube put in communication with C, and as they are at this moment both full of fluid, syphonic action will be set up, and the stomach will be rapidly emptied. When this has once taken place the handle will not again require to be moved into the position at (*b*), as the tube leading from C will never again become empty. It will then be found that by moving the handle D successively into the positions at (*a*) and (*c*) the stomach can be filled and emptied as many times as desired.

The apparatus was manufactured for me by the Pneumochemic Co., 120, Longworth-street, Cincinnati, U.S.A., whose London agents are Messrs. Allen and Hanburys. Wimpole-street, W.

THE OPEN-AIR TREATMENT OF CONSUMPTION:

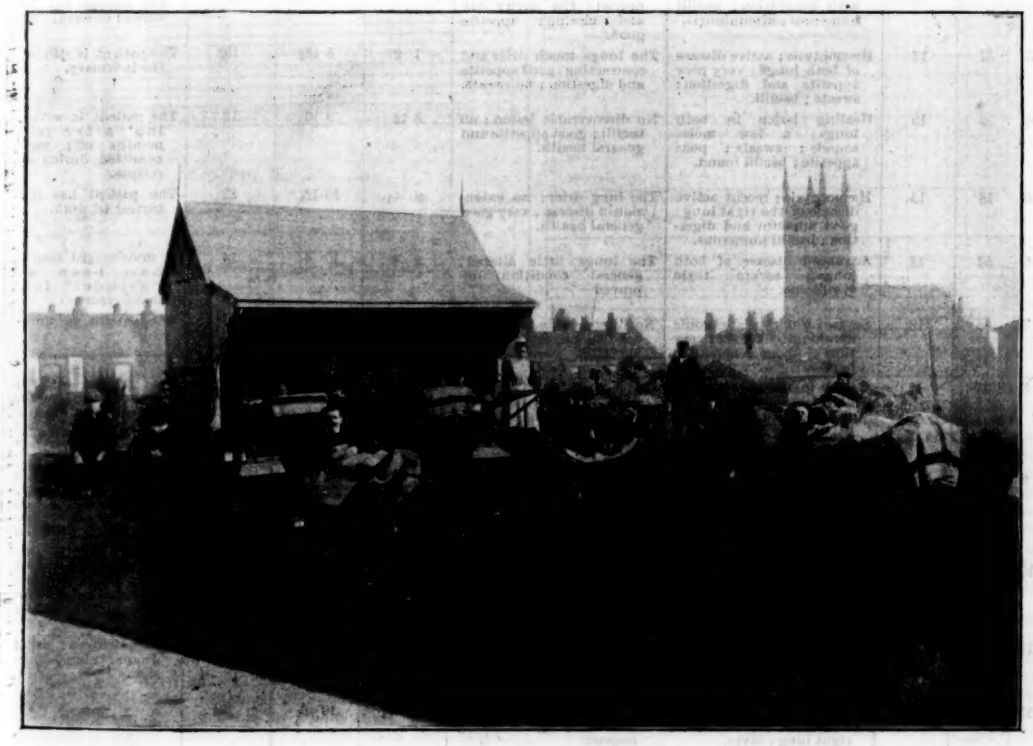
SIX MONTHS' TRIAL AT THE SHEFFIELD ROYAL INFIRMARY.

By NOEL BARDSWELL, M.D. EDIN., L.R.C.P. LOND.,
HOUSE PHYSICIAN TO THE SHEFFIELD ROYAL INFIRMARY.

THE rapidity with which British accommodation for the carrying out of the open-air treatment is increasing bears eloquent testimony to the fact that this treatment has been successfully adopted in this country and that the importance of this success is now widely appreciated alike by the medical profession and by the public. This growing accommodation is, however, for the most part only within reach of those who can afford to pay several guineas a week for a prolonged period and is consequently of no use to the phthisical poor and middle-class. The extremely inadequate accommodation now available for phthisical subjects belonging to these classes and the inferiority of Great Britain to most continental nations in this respect have been well pointed out by Dr. F. R. Rufenacht Walters in a recent work on Sanatoria, and he suggests the building of sanatoria throughout the country as a remedy. A few years will probably see the erection of such sanatoria, but in the meantime it remains for existing hospitals and allied institutions to determine to what extent they can play the part of sanatoria and at once give the poorer classes a chance to obtain the benefits of the open-air treatment. (See Fig. 1.)

The following report of a six months' trial of this treatment carried out in Sheffield, for permission to publish which I am indebted to the courtesy of Dr. W. Dyson, Dr. W. S. Porter, and Dr. W. T. Cocking, the honorary medical staff of the Sheffield Royal Infirmary, is, I think, worthy of notice as evidence of what can be done by a hospital in a large city for the relief of its consumptive poor, even when handicapped by its situation in an atmosphere constantly contaminated by smoke and other noxious impurities, conditions which are inseparable from the industries on which the city's prosperity depends. Without going into a detailed account of the treatment adopted or particulars of the progress of the cases I may say that the Nordrach system has been followed as closely as circumstances permitted and that the cases admitted for treatment have been unselected. The trial was commenced in May and at the present time there are 20 patients under treatment, this being the limit of our accommodation. The results of the treatment, as manifested by improvement in the condition of the lungs, appetite, digestion, weight, and general well-being, with diminution of cough and expectoration and of the usual symptoms of constitutional disturbance, have been

FIG. 1.



Picture of patients lying out-of-doors.

TABLE I.—*General Summary of all Cases treated.*

Stage of disease.	Number of cases.	Nearly cured.	Much improved.	Some improvement.	No improvement.
Stage 1	—	—	—	—	—
Stage 2	9	1	6	2	—
Stage 3:—					
(a) With good digestion and evidence of arrested disease and of healing	3	3	—	—	—
(b) With good digestion; with much active disease but with some evidence of commencing arrest and healing:—					
(1) Without pyrexia	4	1	3	—	—
(2) With pyrexia	2	—	2	—	—
(c) With bad digestion; with active disease, grave constitutional disturbance, high fever, &c., including cases of mixed infection and miliary tubercle of lung	7	—	2	5	—
Chronic fibroid, with tubercle bacilli in sputum and varying amount of pyrexia and constitutional symptoms	3	1	2	—	—
Cases of pulmonary tuberculosis complicated with tuberculous disease of the larynx	2	—	1	—	1*
Total	30	6	16	7	1

* In statu quo.

TABLE II.—*Summary of 12 Cases.*

Case.	Years of age.	Number of weeks under treatment.	Condition on admission.	Condition now or on leaving.	Weight.			Remarks.
					On admission.	Now or on leaving.	Total gain.	
					st. lb.	st. lb.	lb.	
1	16	38	Almost dying; extreme diarrhœa; high fever; miliary tubercle; bacilli; bad digestion; anorexia.	Much fibrosis; extensive healing; good appetite; no fever; fewer bacilli; walks three or four miles daily.	4 11	5 12½	15½	The patient is still in the infirmary.
2	24	29	Active disease of both lungs, with excavation; bacilli numerous; albuminuria.	The lungs greatly improved; the cavity dry and closing; appetite good.	8 12	9 12	14	The albumin remains; the patient has returned to work.
3	37	17	Hæmoptysis; active disease of both lungs; very poor appetite and digestion; sweats; bacilli.	The lungs much drier and contracting; good appetite and digestion; no sweats.	7 8	8 13½	19½	The patient is still in the infirmary.
4	22	15	Healing lesion in both lungs; a few moist sounds; sweats; poor appetite; bacilli found.	No discoverable lesion; no bacilli; good appetite and general health.	8 12	9 10	12	The patient is working after ten months off; was admitted during a relapse.
5	18	13	Hæmoptysis; recent active disease of the right lung; good appetite and digestion; bacilli numerous.	The lung drier; no extension of disease; very good general health.	9 4½	10 12½	22	The patient has returned to work.
6	52	13	Advanced disease of both lungs; severe toxic symptoms.	The lungs little altered; general condition improved	9 4	10 4	14	A middle-aged man; has been a "grinder" for many years.
7	43	12	Severe hæmoptysis; chronic fibroid; slight fever; very thin; poor appetite; bacilli.	No discoverable lesion; no bacilli; no fever; good appetite.	7 10	9 5½	23½	The patient is working.
8	17	11	Cavity in the right apex; high fever; sweats; anorexia; poor digestion; bacilli.	The cavity dry and healing; no fever; no sweats; good appetite and digestion.	6 6	7 8½	16½	The patient, who is still in the infirmary, walks three or four miles daily. The general health is quite restored.
9	41	8	Very active disease of the right lung; great prostration; high fever; great anorexia; vomiting; sweats; very numerous bacilli.	Marked improvement in the lungs and in the general condition; fever less; sweats rare; appetite fair and digestion improved.	7 13	9 0	15	The patient, who is still in the infirmary, had lost 7 lb. in the seven weeks before admission, when an out-patient.
10	18	8	Active disease of both lungs with excavation; sweats; fever; appetite fair; bacilli.	The lungs improving; no fever; no sweats; very good appetite.	6 8	7 6½	12½	The patient had lost 2 st. in the three months before admission. Is still in the infirmary.
11	17	4½	Healing cavity in the right apex; active disease in the left; slight fever; good appetite.	Rapidly improving in every respect.	6 5½	7 3½	12	The patient was losing ground before admission.
12	34	4½	Recent hæmoptysis; fairly extensive disease of the right lung; fever.	No fever; good appetite; is improving in every respect.	9 7½	10 6	12½	—

similar to those which have followed the trial of the treatment under more favourable meteorological conditions; and for the sake of brevity I have made out the following tables, which, however, I must preface with a few words of explanation. The common method of classifying phthisical cases by grouping them under the three stages of (1) infiltration, (2) softening, and (3) cavity formation, is, as Dr. Osler points out, very unsatisfactory, "the patient in the third stage with well-marked cavity often being in far better condition and having far greater prospects of recovery than a patient in the first stage with diffuse consolidation." Equally unsatisfactory is this classification for purposes of statistics; for instance, several of our worst cases were admitted in an advanced condition of Stage 2 and are now in Stage 3, with healing lungs and incomparably better in every respect. I have therefore subdivided Stage 3 of cavity formation into three groups, depending on the quality of the digestion and appetite and on the amount of evidence of healing present. Clinically, too, with increasing evidence of arrest of active disease and of commencement of healing, we get improvement in all toxic symptoms—viz., pyrexia, night-sweats, impaired digestion, &c. Cases which are recorded under the head of "Some improvement" include those in which there is distinct evidence of arrest of the spread of the disease and some improvement in weight, temperature,

FIG. 2.

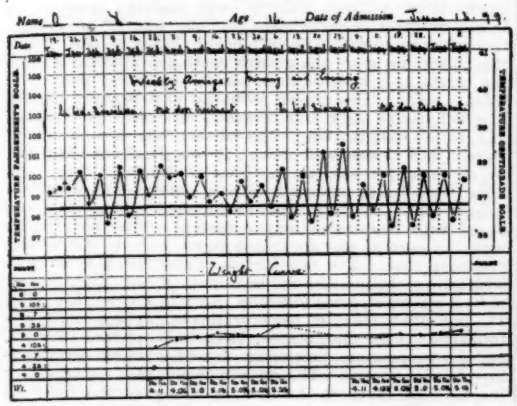
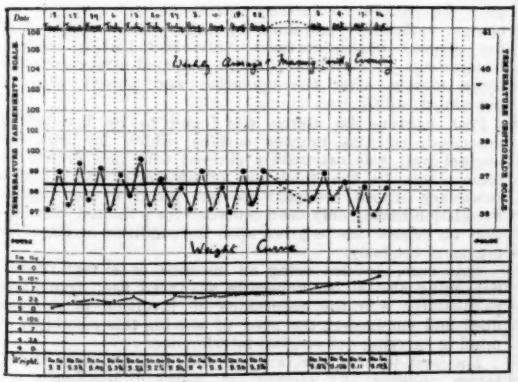


FIG. 3.



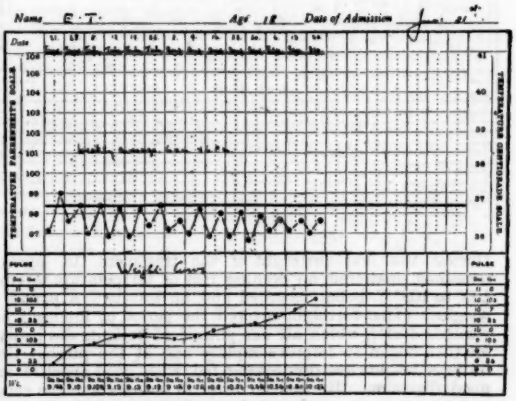
and general condition. Cases headed "Marked improvement" are those who are well on the road to recovery, who have become mostly apyrexial, with recovered appetite and digestion, who have gained considerable weight, and whose lungs show abundant evidences of healing. Cases recorded as "Nearly cured" are those in whom there is little or no evidence of active disease, whose sputum when obtainable is free from bacilli, and who, having regained their general health, have returned to their occupations. Perhaps I have been over-cautious in not recording at least two of this class as quite cured.

The following is a brief clinical record of three cases with their charts.

CASE 1 (No. 1 in Table II.).—A male, aged 16 years, was admitted on Jan. 13th, 1899, before our present open-air *régime* had been organised. He was then in an extremely collapsed condition and was suffering from profuse diarrhœa, constant sickness, night-sweats, and high fever. He was too ill to be properly examined for the next six weeks, when the diarrhœa having ceased he was carried out into the grounds daily. His weight was then 4 st. 11 lb.; he was very emaciated and anæmic, with much fever. (See Figs. 2 and 3.) There was evidence of extensive scattered lesions in both lungs and the sputum was crowded with bacilli. For seven weeks he rapidly improved under the open-air treatment; the temperature came down, his appetite improved, and he gained six and a half pounds in weight. He then had a very severe relapse, the diarrhœa again being most obstinate. This lasted for three weeks, during which period he was kept in an ordinary ward, and he lost all the weight which he had previously gained. The open-air treatment was re-commenced in the last week of April and it is being continued at the present time. He is now apyrexial, his appetite is good, though his digestion is still impaired. His lungs are very much drier, and the cough, the sputum, and the bacilli are much less. He now weighs 5st. 12¾ lb., this being a gain of 15¾ lb. since May. He walks from three to four miles a day and is greatly improved in appearance and general health.

CASE 2 (No. 5 in Table II.).—A male, aged 18 years, was admitted on June 21st, complaining of cough, hæmoptysis, and recent loss of weight. He had had three attacks of hæmoptysis during the six weeks prior to admission and occasional night-sweats. On admission he was found to have extensive consolidation in his right lung, commencing to break down. The cough

FIG. 4.



was slight and the sputum was small in amount but it contained numerous bacilli. His general condition and physique were very fair, as was also his digestion. He had no fever and he weighed 9 st. 4¼ lb. Under the open-air treatment he rapidly put on weight, his appetite improved, the night-sweats were lost, and the cough and expectoration had almost disappeared. On leaving, the lung was much improved, there being much fewer moist sounds and no extension of the disease. (See Fig. 4.) He had gained 22 lb. in weight and was quite restored in general health. After a month's stay at the seaside he is now returning to work.

CASE 3 (No. 8 in Table II.).—A male, aged 17 years, was admitted on August 11th complaining of cough and loss of flesh. He gave a history of phthisis of ten months' duration but had improved in his general condition during the spring. During the three months before admission he had lost ground again and had become worse in every respect. On admission he was found to be a pale, listless boy of poor physique.

He had high fever, great anorexia with a tendency to vomiting and diarrhœa, and sweats occurred nearly every night. He had fairly extensive disease of his right lung with a cavity in the apex. The sputum averaged about an ounce daily and it contained numerous bacilli. (See Figs. 5 and 6). The patient's weight was 6 st. 6 lb.

FIG. 5.

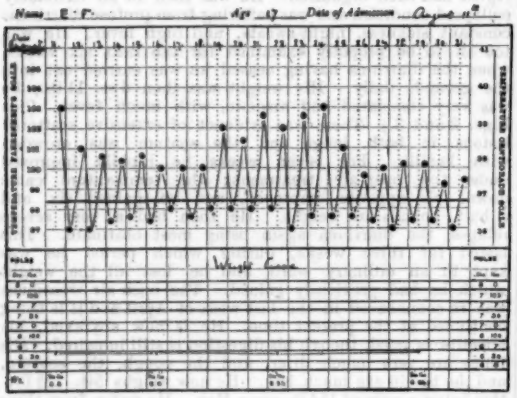
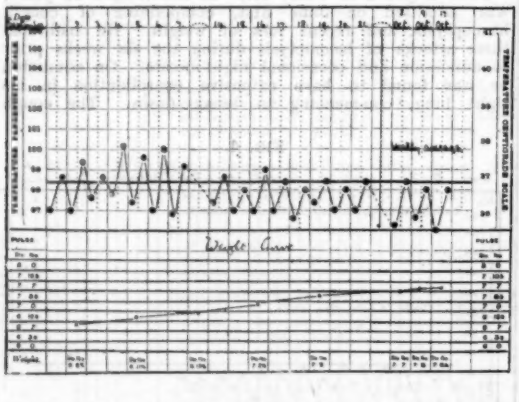


FIG. 6.



During the first fortnight of the treatment the pyrexia remained unaltered, an evening rise of temperature to from 100° to 103° F. being recorded and he lost half a pound in weight. (That fortnight covered the period of intensely hot weather during which all our phthisical patients did badly.) He then began to improve rapidly and at the present time he is a bright, healthy-looking lad with good appetite and good digestion. He has no fever or sweats and the cough and expectoration are much less. The lung is healing and the patient has gained 16¼ lb. in weight.

Sheffield.

ON A CASE OF SARCOMA OF THE UTERUS WITH INVERSION.

BY JAMES M. WILLIAMSON, M.D. EDIN.,

VISITING PHYSICIAN TO THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

THE patient, an unmarried woman, aged 80 years, presented herself on Sept. 5th, 1896, suffering from hypogastric pain and glairy vaginal discharge of recent duration. An examination per vaginam revealed what was taken to be a tiny pedunculated polypus hanging through the os uteri. No further visit took place for a month, till Oct. 3rd, when, on receiving a report that a membranous shred had been passed with the urine, a vaginal examination was again made and it was found that the supposed polypoidal growth had disappeared. A month later, on Nov. 4th, the patient again began to complain of severe straining and hypogastric pain with, on this occasion, blood-stained, offensive vaginal discharge. The os uteri was now found to be dilated and a large sloughy mass presented. Free douching with carbolic lotion was used and on the following day, a Neugebauer's speculum having been introduced, a softish growth, much of it very fœtid, was removed piecemeal with long ovum forceps, the mass amounting in all to a teacupful. There was very little bleeding and within a few hours the patient was free from pain. Careful carbolic douching was continued and a week later there were no signs of growth protruding at the cervix and the os uteri was contracting. Portions of the growth were examined by the Clinical Research Association who reported that microscopic sections showed "sarcomatous tissue and blood-clot, the sarcoma consisting of round, oval, and short spindle-cells."

The patient remained free from discomfort for six months, but in May, 1897, the old hypogastric pain and straining returned and there were rather free losses of blood. The os uteri was now once more found to be widely dilated and a large fungating mass protruded through it. Within a few days the tumour descended low into the vagina and pain became so severe that operative relief was imperative. On June 1st, 1897, under an anæsthetic a thorough examination, difficult hitherto, was rendered possible. A large, irregular, elastic mass, of the size of an orange, reached down to within an inch of the ostium vaginæ. Above this presenting mass the growth continued upwards through the cervix as a smooth, firm, pseudo-pedicle, as thick as an infant's wrist. This proved to be no pedicle at all, but the inverted uterine body, a fact readily confirmed by bimanual and rectal examination. The tumour was now seized by volsella and drawn well down; it was sessile and attached by an extensive base to the inverted fundus. Large portions were freely removed with a curette, and when the volsella had lost their hold the inverted fundus itself was seized with fenestrated tongue forceps while the scraping with the curette was continued right down to the uterine muscular coat. The raw surface was afterwards swabbed with pure carbolic acid, but reposition of the uterus proved to be a matter of great difficulty and was not accomplished. The immediate result of the operation amply justified its performance. Pain disappeared, sleep and appetite returned, and the temperature, previously exceeding 100° F. every evening, fell to normal. The growth was again examined by the Clinical Research Association, who gave the following report: "The growth is a spindle-celled sarcoma arranged in interlacing bundles. It contains a considerable number of larger multinuclear cells and there are areas of degeneration to be seen." From this time onwards uterine symptoms gave the patient no further trouble beyond a slight discharge, sufficiently corrected by antiseptic douching. But her general health declined. She had had a cerebral hæmorrhage in November, 1895. A second attack occurred three months after the operation and proved fatal in September, 1897.

Post mortem the uterus was found to be inverted as described, and its mucous surface, which lay next the vaginal wall, was extensively covered with new growth, in some places to the thickness of an inch, and a large secondary deposit occupied the left fornix of the vagina. Permission having only been conceded for a limited examination no report can be given upon the condition of the other organs of the body.

This case, besides being an instance of a rare disease happening also at an unusually advanced age, exemplifies particularly well the occurrence of inversion in sarcoma uteri and emphasises the need of bearing this possibility in mind in carrying out surgical interference.

The best idea of the rarity of the disease is given by the tables collected by Gessner in Veit's "Handbuch der Gynäkologie," published in June, 1899. Out of a total of 9133 cases of uterine tumour there enumerated only 18 were sarcomatous. With regard to age I have been unable to find any record of a case in a patient whose age, like that of the present one, exceeded 80 years. Gessner, in his article just quoted, has collected 223 cases of sarcoma of the uterus, but in only one of these was the patient's age given as over 70 years.

Ventnor, Isle of Wight.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON TEMPERANCE HOSPITAL.

A CASE OF CALCULUS VESICÆ IN A MAN, AGED 53 YEARS; SUPRAPUBIC LITHOTOMY; BLADDER SUTURED; CATHETER TIED IN FOR 12 DAYS; UNINTERRUPTED RECOVERY.

(Under the care of Dr. W. J. COLLINS.)

THE treatment of calculus of the bladder is at the present time in a transition stage. Forty years ago the lateral operation was acknowledged by nearly all to be the best for the large majority of cases of stone, for comparatively few were submitted to lithotrity. The improvements effected by many surgeons, but especially by Bigelow in the technique of the operation of lithotrity—improvements so great as practically to make a new operation—caused lithotrity to become in skilled hands far safer and more thorough than it had ever been before, and for the average case of stone lithotrity replaced the cutting operation; the only exceptions were cases of stone occurring in boys and cases of large, hard calculi. Of later years even these have been submitted with success to crushing. Keegan showed that the urethra of the child was much more capacious than had been imagined, and the manufacture of larger and stronger lithotrites made it possible for the surgeon to deal with success with any stone of whatever size or material. More recently still there has been a revival of the high operation of lithotomy. Suprapubic lithotomy had in the hands of Cheselden a mortality of only 10 per cent. when he devised the lateral operation, and now that fear of wounding the peritoneum has been almost banished by our precautions against sepsis it is not improbable that this operation will in many cases replace the crushing method. There are several arguments in its favour: the condition of the interior of the bladder can be closely observed; enlargement of the prostate, even if enormous, in no way interferes with the operation; and the risk of leaving behind a portion of the stone or a second stone is reduced to a minimum. Dr. Collins's case shows how rapid, simple, and safe suprapubic lithotomy can be.

A man, aged 53 years, healthy except for occasional rheumatism, had 14 years ago, after a sharp attack of pain in the left loin, passed a small calculus. Since then he had had several attacks of renal colic and had passed in all five stones, the largest being of the size of a cherry stone. The last was passed in May, 1899. On two or three occasions he had had hæmaturia. He had been sounded on several occasions at other hospitals.

On Sept. 25th he was admitted into the London Temperance Hospital, under the care of Dr. W. J. Collins, complaining that for the past fortnight he had been suffering from shooting pains in the groins and urethra and some hæmaturia. On admission he was found to be fairly nourished and with the exception of some emphysema there was no evidence of organic disease. There was some frequency of micturition, but no hypogastric tenderness. The urine was of specific gravity 1018 and slightly acid; it contained no albumin, blood, or sugar; some phosphates were observed on boiling. On sounding the bladder Dr. Collins found a calculus which was apparently hard and rough and of moderate size.

On Sept. 5th, under ether, successful sounding having been repeated, the urine was withdrawn, the bladder was distended with boric lotion, and the penis was ligatured. A suprapubic incision three inches long was made in the linea alba and the cellular fatty tissue was torn through; the bladder came well into view and was incised; two fingers were inserted and the stone was withdrawn. An examination of the bladder revealed no other lesion except slight prostatic enlargement. A soft rubber catheter was tied in with the eye adjusted so as to be just within the bladder and the wound in the bladder was firmly closed with silk sutures. The skin wound was stitched at either end and dry iodoform dressing was applied. The urine was received into a glass flask strapped to the left thigh and was blood-free on the fourth day. The catheter was changed on the third day and dispensed with on the twelfth. The temperature never rose above 99·4° F. and the wound healed primarily. The patient was discharged on Oct. 28th quite well. The calculus weighed 38 grains and was nut-brown and of uric acid. It measured seven-eighths of an inch by half an inch.

CITY HOSPITAL, BIRMINGHAM.

A CASE OF MEMBRANOUS ANGINA AND MEMBRANOUS VAGINITIS OF A DOUBTFULLY DIPHTHERITIC NATURE OCCURRING IN A PATIENT CONVALESCING FROM SCARLET FEVER AND ASSOCIATED WITH AN UNUSUAL ERYTHEMATOUS ERUPTION.

(Under the care of Dr. C. KILLICK MILLARD.)

THE questions of the nature of the rash observed in the case recorded below and the origin of the membranous exudation which occurred at the same time are of the greatest interest. As to the membrane on the fauces it is certain that in some cases of scarlet fever a membranous inflammation of the fauces occurs, not diphtheritic in nature. A definite instance of this was described by Dr. E. W. Goodall and Dr. J. W. Washbourn in 1894[1] and when bacteriologically examined the exudate contained no diphtheria bacilli but only some micrococci, and three similar cases were cited. A membrane may not only occur in the course of the disease, but scarlet fever is liable to be followed by secondary throat affections, and some of these are true diphtheria, as evidenced by the presence of the Klebs-Löffler bacillus and consecutive paralysis. The membrane in a case of scarlatinal angina is always found to contain micrococci, generally streptococci, occasionally staphylococci; and Kemper[2] has never found the Klebs-Löffler bacillus in membranous scarlatinal inflammation of the fauces. In 117 cases of non-membranous scarlatinal angina G. H. Lemoine[3] without an exception found a streptococcus. So it may be considered as fairly proved that a streptococcic infection may give rise to a membranous exudate both during an attack of scarlet fever and also after the subsidence of the fever, and that even when there is no membrane a streptococcic infection may be present. With regard to the rash in Dr. Millard's case it is generally acknowledged that a streptococcic or a staphylococcic infection may give rise to various forms of rashes generally erythematous in character. A similar septic origin is not improbably the explanation of some, at least, of the cases of "surgical scarlet fever," though undoubtedly some of these are instances of true scarlet fever as shown by infection of others. On the whole it is probable that the membranous exudation and the rash in the following case were both the effects of a staphylococcic infection.

The patient was a little girl, aged seven years, a scarlet fever convalescent. The attack of scarlet fever was a simple one and the temperature fell to normal before the end of the first week. On Feb. 3rd, at the end of the third week, her temperature suddenly rose to 102° F. and on the following day it went up to 104°; the fauces were swollen and inflamed, the cervical glands were enlarged, and the tongue was furred. An erythematous eruption now appeared having the following character. It was first noticed on the arms, legs, and buttocks, but soon spread to the trunk, neck, soles, and palms, the face and scalp being the only parts not affected. The eruption began as isolated, raised papules. These quickly became larger, coalesced, and formed irregular, circinate patches with sharply defined and slightly raised edges. The skin between the patches remaining white and unaffected the appearance produced was very striking. The patches were uniformly red, not being paler towards the centre, and there was no itching. The eruption continued to spread till in places, especially on the back, it became quite confluent. After persisting for four days it gradually faded, leaving a marked staining behind; it was followed by branny desquamation.

[1] Transactions of the Clinical Society of London, vol. xxvii., p. 81.
[2] Medical Bulletin, Philadelphia, December, 1895.
[3] Le Bulletin Médical, Dec. 22nd, 1895.

Returning now to the throat condition this continued to get worse; the temperature reached 105°, and on Feb. 6th, four days from the onset and two days after the erythema had appeared, both tonsils were found to be covered with membrane. Simultaneously a discharge was reported from the vagina and on examination a small patch of membrane, of about the size of a split pea, was discovered on one labium majus. This readily stripped off, leaving a raw surface. On separating the labia the fossa navicularis and entrance to the vagina were found to be plugged with similar membrane. The parts were inflamed and acutely tender. The case having all the clinical characters of diphtheria, the child was transferred to an isolation ward and 3000 units of diphtheria antitoxin were injected, followed four and a half hours later by another dose of 1500 units. A cover-glass preparation and a cultivation on blood serum were made in the usual way from the membrane removed from the vulva and a cultivation was also made from the membrane from the tonsils. Some bacilli of a doubtful nature were seen in the cover-glass preparation but no bacilli of any kind could be obtained from the cultivations incubated at blood heat. Repeated cultivations on blood serum and agar-agar were made from both the vagina and the tonsils but nothing in the least resembling the bacillus diphtheriæ could be found. On each occasion a practically pure growth resulted of an organism apparently identical with the staphylococcus pyogenes aureus.

The patient gradually improved and by Feb. 14th the temperature had fallen to normal, the fauces were clean, and all signs of vaginitis and of the peculiar rash had disappeared. Two days later, however, albuminuria appeared and persisted for ten days. There were no symptoms of paralysis and the patient made a good recovery.

Remarks by Dr. MILLARD.—The above case appears to me to be sufficiently interesting to justify recording. The clinical symptoms, apart from the peculiar erythema, were exactly those of faucial diphtheria following scarlet fever, with auto-infection of the vulva and vagina, and the improvement following the administration of the antitoxin and the subsequent albuminuria both help to confirm this diagnosis. On the other hand, it was certainly remarkable, if the case really was diphtheria, that no Löffler's bacilli could be found. The method which I followed in searching for them was the usual one, of which I had had considerable experience, and I made repeated cultivations, about six or more, at different dates, some with actual membrane and some with swabs, but all with similar results. The constant presence, in almost pure culture, of the staphylococcus pyogenes aureus suggests that it may have been the true cause of the condition and may possibly explain the peculiar erythema. I have seen many adventitious rashes following scarlet fever and many of purely septic origin, but I have never seen anything quite like the one in question. The subsequent albuminuria may quite well have been a sequela of the scarlet fever and independent of the (?) diphtheria.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

A CASE OF JAUNDICE DUE TO FLOATING KIDNEY; LUMBAR FIXATION; RECOVERY.

(Under the care of Dr. P. CLENNELL FENWICK.)

FLOATING kidney may give rise to much discomfort and may simulate many forms of tumour, but it is very rarely that it causes any really important pressure symptoms, as in the following case, where it pressed on the biliary passages and caused obstructive jaundice. The result of the fixation operation was very satisfactory.

A woman, aged 25 years, was admitted into the Christchurch Hospital, New Zealand, suffering from severe jaundice, having had several previous attacks. On examination there was a large, hard tumour lying under the right costal margin, only slightly moveable and apparently connected to the liver. An exploratory incision was made to determine the nature of the mass and it was immediately seen to be the right kidney which was lying close to the costal margin and apparently pressing on the gall-bladder and the bile-ducts. The abdominal incision was left open and the patient having been turned on to the left side an incision was made in the lumbar region down to the kidney. Dr. Thacker (the physician by whom the case was transferred to Dr. Fenwick) then inserted his hand through the abdominal wound and manœuvred the wandering organ into its natural position, where it was fixed by three deep silk sutures passed through the kidney substance and secured to the lumbar muscles. Both wounds were then closed. In two days the jaundice had disappeared and a week later the wounds were found to be well healed. The patient was discharged six weeks later and when seen two months after the operation was in perfect health and of normal complexion.

Remark by Dr. FENWICK.—In a country where almost every tumour in the hepatic region proves to be of hydatid origin I thought that this case was of peculiar interest.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

LABORATORY MEETING.

Diphtheria-like Organism found in Pigeons' Canker.—The Bacillus of Pseudo-tuberculosis.—Hæmolytic Action of Tetanus Toxin.—Method of Standardising Anti-pneumococcic Serum.—Chromocyte Clumping.—Diphtheria Immunity.—Tetanus Immunity.

A MEETING of this society was held at the laboratory of the Jenner Institute of Preventive Medicine, by the invitation of the council of the institute, on Nov. 7th, Mr. WATSON CHEYNE, President, being in the chair. There was an unusually large attendance of members and among those present was Lord Lister, chairman of the council of the institute.

Dr. ALLAN MACFADYEN and Dr. R. T. HEWLETT made a communication upon a Diphtheria-like Organism found in Pigeons illustrated by lantern slides and microscopic specimens. A swabbing was sent in the usual way to the Jenner Institute of Preventive Medicine by Dr. Sharman of Rickmansworth to be examined for the presence of the diphtheria bacillus. The report sent to him stated that the Klebs-Löffler bacillus had been found. Dr. Sharman then informed Dr. Macfadyen and Dr. Hewlett that the swabbing had been taken from a pigeon's throat suffering from a disease known as "pigeon canker." This interesting fact led them to follow the matter up. For this purpose they obtained a number of diseased birds, two of which were shown. The disease appeared in two forms, either attacking the scalp or the throat and fauces. It might attack the eyelids, the appearance being that of a warty growth of about the size of a pea, which might increase in size and close the eye. There was no evidence of the eye itself being affected. The growth might drop off, leaving the subjacent tissues quite healthy. It was a strictly local disease. In the throat the disease usually attacked the maxilla and might become as large as a small nut, presenting in appearance a yellowish, dry, and caseous mass. On the palate a membrane might appear and was very adherent. In all these phases of the disease the diphtheria-like organism was found in large numbers and usually mixed with cocci. The bacilli presented the Klebs-Löffler appearance as regards size, parallel arrangement, and polar staining. The bacilli were non-motile and stained by the Gram method. Apparently two strains were obtained, No. 1 giving a dry and adherent growth on serum like the xerosis bacillus and also a pellicle on broth like the Parkes diphtheria bacillus, and No. 2 more closely resembling in growth, &c., the diphtheria bacillus as usually met with. The first strain was obtained from the scab and gave a feeble indol reaction; the second was obtained from the throat and gave a good indol reaction. Both strains produced acid in fluid cultures like the diphtheria bacillus. Cultures and microscopic specimens were exhibited showing the similarities between these organisms and the Klebs-Löffler bacillus. The organisms were stained by Neisser's method. The disease could be inoculated directly from pigeon to pigeon, but all attempts had hitherto failed to reproduce the disease in pigeons with pure cultures. With guinea-pigs and mice solid and fluid cultures had given negative results as regards infection or intoxication. Dr. Macfadyen and Dr. Hewlett then proceeded to examine the throats of healthy pigeons and in every case they found the "throat" strain of the same

organism—i.e., the one most closely resembling the Klebs-Löffler bacillus. They wished to reserve any discussion of the pathology and etiology of the disease for a future communication. The point they wished specially to bring before the society on that occasion was the interesting fact that in the throats of pigeons, both diseased and healthy, there was to be found an organism which might be, and had been, mistaken for the Klebs-Löffler bacillus and which resembled it in its morphological, cultural, and staining peculiarities—in everything, in short, save in its pathogenic and toxic properties.

Dr. KLEIN communicated the results of his researches into the Bacillus of Pseudo-Tuberculosis, illustrating his remarks with numerous lantern slides. He referred to the discussion at the Pathological Society on this subject and agreed that the name "pseudo-tuberculosis" was objectionable, but it must be applied for want of a better. The disease he referred to was that described by A. Pfeiffer, which was manifested in mammals as numerous nodular lesions in the glands and elsewhere which underwent caseating and necrotic changes. It was due to a definite organism. He had met with this organism while examining the waters derived from the river Lee and the river Thames as supplied by the East London Water Company. The organism had been found in the brushings from the filters. If this sediment were injected into guinea-pigs they died in from 16 to 28 days afterwards, the inguinal glands at the site of inoculation caseated, and in the viscera could be found lesions typical of pseudo-tuberculosis. The liver and spleen were infiltrated with firm nodules, somewhat like true tuberculous nodules. Raw river water was then tried and in three times out of six in Lee water, and in once out of six in the Thames water, the same results had been achieved. The origin of this contamination was then discussed. Was it sewage pollution? But the bacillus could not be found in ordinary sewage, though in some rare cases inoculations of sewage were successful. He had also searched the slime from ordinary coke filters and had been successful in some cases in producing the disease. The organism could be isolated without any difficulty and its characters were those described by Pfeiffer, Price, and others. Its behaviour was so very much like that of the tubercle bacillus that it was almost impossible to distinguish it from that organism. In guinea-pigs subcutaneous, intra-peritoneal, and intra vascular injection, or mixing pure cultures with their food, resulted in death in from nine or ten days to three or four weeks. Feeding was one of the surest ways of infecting the animals. Lantern slides were exhibited of the bacillus—short thick rods occurring in the cells and outside also; of tuberculous caseating masses found just like true tubercle in the pancreas; of sections of liver pervaded with nodules showing necrotic centres, and in these were dense masses of bacilli. The necrosis also extended to lungs in which pneumonic patches containing dense masses of bacilli were found. The bacilli sometimes formed chains, as other observers had described. Peyer's patches were specially and primarily affected in animals fed on the bacilli, and in two cases the infection spread all over the body. The Peyer's glands swell up and necrose, and thence the mesenteric glands, the liver, the spleen, and the lungs become infected. Previous observers had produced the disease by inoculating purulent matter from animals and man. In order to see if human beings could be infected by the cultures he had obtained from water he had injected two monkeys subcutaneously and the process of infection was accomplished. In them the disease had been produced in the lymph glands, the liver, and elsewhere. It seemed highly probable, therefore, that man could be thus infected. Cases of the disease occurring spontaneously have been recorded in man. Since it was so prevalent in water it had occurred to Dr. Klein to try milk. He had collected the deposit of six samples of milk and injected the deposit into six guinea-pigs. One of these developed the disease quite typically. It was the same process, but milder. He had also found it possible to immunise guinea-pigs by injecting dead cultures. Broth cultures were no good, but sterilised dead agar cultures injected subcutaneously was the method employed. What the relation was between true tuberculous organisms and this pseudo-tuberculosis must be deferred to a future occasion.—Replying to the PRESIDENT Dr. KLEIN said that the organism was found in the blood-vessels. It would not stain with methyl-blue or well with gentian violet; it could be stained by Gram's method, but boiling with Leuffler blue was the best way of revealing it.

Dr. GEORGE DEAN and Dr. ALFRED SALTER gave a test-tube demonstration of the Hæmolytic Action of Tetanus Toxin. Ehrlich first showed that in addition to the spasm-producing poison secreted by the tetanus bacillus there was also a second which had the power of dissolving the red blood corpuscles of various animals. Further, in tetanus antitoxin there was a specific anti-lysogenic body. Normal horse serum contained small quantities of the neutralising substance, and Dr. Dean and Dr. Salter showed that antitoxin obtained from diphtheria as well as from tetanus-immune animals appeared to contain more of this than was found in normal serum. This might be due to small quantities of hæmolytic substance occurring in diphtheria toxin. They showed that the hæmolytic substance acted upon the corpuscles of every animal tested with the exception of the goat. It was neutralised by an emulsion of brain matter in the same way as had been demonstrated by Wassermann for the spasm-producing poison.

Dr. J. W. EYRE and Dr. J. W. WASHBOURN described their Methods of Standardising Anti-pneumococcic Serum. First it was necessary to ascertain the fixed virulence of a living culture by repeated passage through rabbits. The virulence of some strains were standardised much more easily than others. The medium used was agar on which sterile blood had been smeared. The chief difficulty was to measure sufficiently minute quantities of the culture. This was done by means of a platinum loop of special size. The portion thus measured was placed in a measured quantity of broth in a capsule. By means of the same loop a portion of this emulsion was mixed with another capsule of broth and in this way a series of dilutions was obtained by thorough admixture. To determine the minimum falta dose a series of rabbits was employed, the broth being injected into the peritoneal cavity and the serum into the veins. Out of a number of different strains some (perhaps four out of six) would afford perfect protection, but others would not protect. Strains varied a good deal in this respect and thus resembled streptococcus. Anti-pneumococcic serum was more powerful than anti-streptococcic serum, and the former was more readily standardised. The chief difficulty with the latter was to get an emulsion or mixture with the broth.

Mr. S. G. SHATTOCK made a communication, illustrated by lantern slides, on Chromocyte Clumping. He observed that the part played by rouleaux formation in hastening the subsidence of the red corpuscles and clearing of the upper part of shed blood had at present come to be almost completely ignored. He had on delaying coagulation by icing in cat and horse blood been surprised to find that not only did subsidence of the red mass in the former occur to a very small degree, but that in the horse the subsidence which was normally so marked no longer occurred. If retardation was inhibited with sodium citrate the rate of subsidence be found in horses' blood greatly exceeded that in cats'; this must be ascribed to the fact that rouleaux formation was much more marked in the first-named animal—a very old observation. Lord Lister had noticed that in "whipped" blood the same difference occurred. Mr. Shattock was therefore led to try if normal horse serum increased rouleaux formation in normal human blood. This was notably the case, as studied by the hanging-drop method. This showed that rouleaux formation was due in part to some property of the serum and it might be regarded as a phenomenon of "agglutination." As confirming this he had found that normal horse serum produced marked clumping in typhoid cultures; the result, however, did not obtain with a dilution of 1 in 50. He had noticed a further likeness in the two phenomena in the fact that when a broth culture of typhoid was mixed with horse serum *in vitro* visible clumping rapidly ensued and this was followed by subsidence, but if the fluids were iced and the mixture was kept iced this result was altogether inhibited; if the iced mixture was then raised to an ordinary temperature the clumping quickly took place. This result of cold might be provisionally explained by supposing that it inhibited or retarded a process that was, whether in chromocyte or bacterial clumping, essentially chemical. He had not detected any difference in rouleaux formation, or typhoid clumping on studying it in red and violet rays; neither were the movements of amœboid leucocytes affected in such altered circumstances. Mr. Shattock re-stated the observation of Wharton Jones that in the blood of inflammatory diseases rouleaux formation was exaggerated, and then stated his own observations showing that the blood serum

from cases of acute pneumonia, acute rheumatism, erysipelas, &c., if added to normal human blood, produced the same exaggeration, whilst normal human serum added in the same proportion (one in one) to normal human blood led to no such result. The formation of a buffy coat in the shed blood in such diseases might be viewed as a Durham's reaction arising from an abnormal clumping or agglutination of chromocytes and their consequent more rapid subsidence; or, seeing that it occurred during the period of infection, it was rather a Widal reaction. This interpretation neither increased nor lessened the difficulty of explaining the specificity of bacterial clumping. Agglutination of the red corpuscles was held by Lord Lister to constitute an important element in the production of stasis in the vessels of an inflamed part, and Mr. Shattock concluded by asking how far bacterial clumping arising during life might not be responsible for the determination of the lesions met with in the later stages of bacterial disease. Such bacterial emboli occurring during natural antitoxinisation might constitute latent sources of future local recrudescence. Possibly the difficulty of explaining the location of the secondary affections in pyæmia as due solely to vascular thrombosis and the transference of disintegrating clot from a primary focus might in this way be removed, if the circulating cocci might clump in any part of the circulatory system.

Dr. GEORGE DEAN read a paper on Diphtheria Immunity. The questions treated of were connected with the duration of active immunity and of antitoxin production, the loss of the power in animals of producing antitoxin in quantities of practical value, and the possibility of recovering that lost power. The experiments were carried out at the Antitoxin Department of the Jenner Institute of Preventive Medicine. The undulatory march of antitoxin production in diphtheria immunity described by Salomonsen and Madsen was discussed and certain statements by those workers were criticised, especially in relation to the best time of giving injections of toxin. A method of immunisation was described by Dr. Dean which gave antitoxins of a higher grade and in a shorter time than the method suggested by Salomonsen and Madsen. The results of ceasing the toxin injections when a high antitoxin value of the serum had been reached was next discussed. The ordinary courses of antitoxin production in diphtheria and tetanus were contrasted. The tendency to a fall in the antitoxin curve in the former, even though large injections of toxin were given, was described. It was found that the serum of animals which had been previously immunised and left for a period of two or three years still contained more antitoxin than could be demonstrated to exist in the case of a normal horse. A large number of experiments had been carried out to ascertain that fact. Could animals which had lost the power of producing antitoxins strong enough to be of practical value recover that lost power? Two horses had been used to test that question and the results obtained showed that the loss was not a permanent one. That observation had practical value in several directions. Weigert had attempted to explain the fall in antitoxin production on Ehrlich's theory by asserting that it was due to an injury to the central nucleus or central ring of the Seitenketten by over-stimulation with toxin. The experiments mentioned above showed either that the central nucleus was not injured and therefore the cell had not lost its reparative power, or that if it was destroyed then other cells were capable of taking on the antitoxin production. The demonstration was illustrated by charts shown on the lantern screen.

Dr. ALFRED SALTER gave an account of some Observations on the Duration and Course of the Antitoxin-producing Function in Tetanus-immune Animals. He showed that whereas in diphtheria immunisation the curve of antitoxicity rose after several months to an acme, and was maintained at this maximum for a very brief period only, subsequently falling in spite of repeated re-inoculations practically to zero, in tetanus the maximum could apparently be maintained indefinitely. A large horse, a Belgian gelding, which he had immunised at Sudbury received its first injection of toxin in October, 1895, and the dose was progressively increased until the animal could take without hurt enormous quantities of the poison. By the end of the first year the serum possessed a strength of 600 units per cubic centimetre as estimated by Behring's original test—i.e., $\frac{1}{600}$ cubic centimetre protected a guinea-pig of 500 grammes weight against ten times the minimum lethal dose. After two years' treatment the value had risen to 5500 units per cubic centimetre and at the end of three years to 10,000 units. During the latter half of the third year injections of living sporing culture (i.e., toxin plus organisms) had been substituted for the toxin alone, and the largest dose which the animal received was two litres of a virus which killed adult guinea-pigs in as small a quantity as one half-millionth of a cubic centimetre. For the past 14 months no further inoculations had been given, but, as repeated testing showed, there had been no decline or even fluctuation in the antitoxic value of the serum. During this long period of rest the horse had been repeatedly bled and no less than 110 litres of blood in all had been abstracted. Estimating the total bulk of blood to be approximately $\frac{1}{13}$th of the body-weight the amount present in the animal's body at any one time would not have exceeded 45 or 46 litres; that is to say, in the 14 months nearly three times that quantity had been removed. He thought that these observations showed that in the case of tetanus-immune animals which had reached the maximum resistance the tissues could continue to elaborate defensive substances without any further stimulation by means of fresh injections of the virus.

OBSTETRICAL SOCIETY OF LONDON.

Tubercle of the Uterus.—Anti-streptococcic Serum.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 1st, Mr. ALBAN DORAN, President, being in the chair.

Dr. P. D. TURNER read notes on Tuberculosis of the Fallopian Tubes and Uterus based on the examination of the genital organs of 27 consecutive cases of phthisis in female subjects in the post-mortem room of the Brompton Hospital. In all cases the naked-eye appearances were noted and a complete microscopical examination was made. The results demonstrated the frequency of tuberculous lesions in these organs in cases of phthisis, and some of the lesions being in a very early stage afforded evidence as to the mode of infection and the development of the disease. Tuberculous lesions of an undoubted character, demonstrated by microscopical structure and the detection of the tubercle bacillus, were found in five cases (18·5 per cent.). In one of these the tubes alone were involved; in two the tubes and the body of the uterus; in one the tubes, the body, and the cervix of the uterus; and in one the tubes, the body of the uterus, and the ovary were affected. All five cases presented some degree of intestinal ulceration. In seven of the remaining cases there was evidence of interstitial or catarrhal salpingitis, and in several of these the condition was suggestive of a tuberculous origin; but no positive evidence to that effect was forthcoming. Dr. Turner gave a detailed description of the lesions met with and inferred that the usual form of tuberculous salpingitis appeared to be due to the entry of bacilli into the open ends of the tubes from the endometrium; infection through the blood-supply probably also occurred, but much less frequently. The cervix was similarly affected. The ovary did not form the same nidus and was comparatively rarely diseased in these cases.—Dr. HORROCKS said that it was unexpected to find such a large proportion of patients with undoubted pulmonary phthisis affected by tuberculous mischief of the uterus and other generative organs. He inquired whether these patients had complained in any way of symptoms associated with the generative organs. These cases did not bear out Louis's law that if tubercle was found in any part of the body after puberty it was sure to be found in the lungs. He related details of a case of tubercle of the cervix uteri which was mistaken for sarcoma.—The PRESIDENT suspected that in the cases where Dr. Turner detected hydro-salpinx the tube was first closed by local peritonitis and then infected with tubercle, whilst in many other cases where the tube was still unobstructed the tuberculous disease begun in the tube was a true tuberculous salpingitis. He referred to Kleinhaus's statement that the tube was the part of the female genital tract the most often affected. In acute tuberculous salpingitis it appeared that the bacillus was found in abundance whilst giant cells were scanty; in the chronic form the giant cells were abundant and the bacilli were scanty. The balance seemed even in Dr. Turner's cases, possibly because subacute exacerbations were frequent.—Dr. TURNER, in reply, said that as far as he knew none of the cases presented any symptoms whatever referable to the lesions in the generative organs. The great

relative frequency with which the lesions had been found he attributed to their having been minutely searched for.

Dr. HERMAN, in a paper on Two Cases in which Life appeared to have been Saved by Anti-streptococcic Serum, said that judgment as to the therapeutic value of the anti-streptococcic serum was difficult because they knew not yet enough about the effects of the streptococcus. If the anti-streptococcic serum failed it might be because it was used too late or because the patient had been poisoned by some microbe other than the streptococcus. In some cases published as examples of success from the anti-streptococcic serum it had seemed to Dr. Herman, from reading the reports, that some of the patients were never in danger and that in some recovery was to be attributed to other therapeutic measures (such as removal of retained placenta) used at the same time as the serum. For these reasons it seemed to him to be impossible at present to draw conclusions as to the value of the serum from statistical tables. Dr. Herman submitted two cases in which, in his opinion, the symptoms were such as to warrant a very unfavourable prognosis, but nevertheless the patients got quite well after anti-streptococcic serum. The first was a case in which a severe operation was followed by great prostration from which the patient recovered, but the rally was followed by renewed prostration, such as in Dr. Herman's former experience had ended in death. With anti-streptococcic serum the symptoms quickly improved and the patient got well. The second was a puerperal case in which the occurrence of three severe rigors on successive days led Dr. Herman to think that the patient was suffering from pyæmia and that secondary abscesses, &c., might be expected. With anti-streptococcic serum the symptoms improved and the only development was a small patch of cellulitis which ended in resolution. He was aware of the difficulty and uncertainty of prognosis in cases such as those now reported, but he submitted that in the present state of our knowledge it was only by the consideration of cases such as these that judgment could be formed.—Dr. CLAPHAM narrated the case of a woman, aged 28 years, who was delivered by a midwife on Nov. 8th of last year. On the third day the temperature rose to 103°F. The uterus was explored and was washed out with sublimate solution. The temperature on the next day was normal, but on the fifth day it again rose. On the sixth day it reached 105° and the pulse was 130. The uterus was scraped and scrubbed with iodine. On the seventh day 15 cubic centimetres of serum were injected and afterwards five more injections of 10 cubic centimetres were made at daily intervals. During this time the temperature rose daily to 105°, falling to 102°. The patient recovered after a tedious convalescence.— Dr. HORROCKS described a case successfully treated with serum which so impressed him that he felt very enthusiastic about the treatment. He had, however, since seen many cases treated by the serum and, on the whole, was bound to admit that he had been disappointed. Some of the cases were described and allusion was made to pain caused by the injections. In spite of the disappointing results so far he recommended the continuance of the serum injections. The solution should be clear and injected with all aseptic precautions and then it was quite safe and harmless and even nutritive.—Dr. CULLINGWORTH spoke of the difficulties inherent in all inquiries into the effect of remedies. He felt it right if the symptoms persisted after exploration and treatment of the uterus to advise the administration of the serum. He mentioned a case in which after removal of pieces of adherent placenta the temperature rose within 24 hours to 104°. Within 12 hours after injection of the serum the temperature had fallen to normal. On the other hand, in another case 12 or 14 injections had been made without any appreciable effect. Until they had more precise knowledge there were sure to be failures, but the serum was as yet the only antidote to puerperal fever that they possessed.—Dr. AMAND ROUTH could only recall one successful case where he had ordered the serum and had done nothing else. This woman had had a rigor with very high temperature on the third day of the puerperium and when seen by him on the eighth day she was apparently dying. The uterus was fixed and the pelvis was full of cellulitic deposit. After injections of the serum the patient recovered after a protracted convalescence and the subsequent development of a pelvic abscess. He was not aware of evidence to prove that the injection of sterilised serum was in itself harmful.—Dr. DRUMMOND ROBINSON had found the results of bacterial investigation of puerperal septic cases to be very unsatisfactory. He therefore disagreed with those who thought that the serum should only be employed in cases in which it was possible to demonstrate the presence of streptococci. He had treated several cases with the serum, but in only one case did the slightest benefit result—a case of puerperal sepsis with membranous vaginitis first treated with serum on the eleventh day.—Dr. ROBERT WISE thought that serum treatment would rarely be required if the conditions were recognised early and modern local and general treatment were applied.—Dr. RIVERS POLLOCK said that the presence of several varieties of micro-organisms might account for the failure of the anti-streptococcic serum.—Dr. EWEN MACLEAN thought that one good result of the present discussion would be the checking of the indiscriminate use of anti-microbic serum. He mentioned that it had been experimentally proved that the serum of an animal immunised to the effects of one bacterium might provoke increased virulence in the effect of another, and it was quite conceivable that the injection of the anti-streptococcic serum in cases which were not caused by that micrococcus might be harmful rather than helpful.—Dr. HERBERT SPENCER had given at the August meeting of the British Medical Association[1] the results of an extensive inquiry into the subject of serum therapy. The results of that inquiry were unfavourable to the treatment and were corroborated by a similar investigation by the American Gynæcological Society. He agreed in regarding it as empirical and unscientific to give the serum in cases where no streptococcus was present. It was, moreover, not free from danger, several deaths having occurred from the injections.—The PRESIDENT agreed with Dr. Spencer as to the high importance of the report on anti-streptococcic serum published in the September number of the *American Journal of Obstetrics*. It should be carefully studied, as it not only seemed to demonstrate that the employment of the serum would not materially improve the results in the treatment of streptococcic infection, but implied that the use of the curette greatly increased the mortality.—Dr. HERMAN replied.

The following specimens were shown:—

Mr. TARGETT: Tuberculous Salpingitis.

Dr. P. D. TURNER: Tubercle of the Uterus.

HARVEIAN SOCIETY OF LONDON.

Treatment with Anti-streptococcic Serum.

A MEETING of this society was held on Nov. 2nd, Mr H. E. JULER, President, being in the chair.

Dr. J. W. WASHBOURN read a paper upon Treatment with Anti-streptococcic Serum. He first considered the question as to whether the various processes associated with the presence of streptococci were manifestations of a single disease or were distinct pathological entities. These processes were: (1) all cases of cutaneous erysipelas; (2) most cases of puerperal fever; and (3) many cases of septic trouble passing under the names of septicæmia, phlegmonous erysipelas, pyæmia, ulcerative endocarditis, &c. He pointed out that the clinical symptoms were not reliable indications of the specificity of a disease. A simple poison, such as lead, might cause cerebral symptoms, paralysis, or colic, according to its localisation. The character of the lesion was also an unreliable criterion, depending, as it did, upon the strength of the virus and upon its localisation. The mode of conveyance of the virus also might determine its localisation. Dr. Washbourn therefore concluded that the conditions above enumerated were manifestations of a single disease. The absolute proof of the relation between erysipelas and other allied conditions must depend upon the identity or non-identity of the associated streptococci. He pointed out that the determination of the identity of various streptococci was a difficult matter. After reviewing the evidence he believed that there were distinct varieties of streptococci only distinguishable by their behaviour towards serum; these varieties might produce either the same or different lesions in the human subject. Dr. Washbourn then described the methods of preparing, standardising, and administering the serum. He quoted cases of pyæmia, septicæmia, puerperal fever, erysipelas, and infective endocarditis to show the value of the treatment. He stated

[1] Brit. Med. Jour., Oct. 14th, 1899.

that in his opinion the serum was of extreme value in certain cases, but that it was valueless in other cases apparently identical. This he attributed to their causation by different varieties of streptococci and he urged the desirability of using a second sample of serum from a different source if the first failed.

Dr. G. DEAN had no doubt as to the protective value of anti-streptococcic serum in rabbits, although its action had nothing like the constancy of the diphtheritic antitoxin, for in one animal many cubic centimetres might be required to show the effect produced in another animal by one cubic centimetre. The death of a rabbit inoculated with a dose of a virulent culture causing death in a control animal might be much delayed or altogether prevented. He thought that some cases of failure might be due to the injections being stopped too soon, for he had found swarms of living streptococci in rabbits as late as the ninth or even the thirteenth day. The varying virulence of apparently similar streptococci was insisted upon, and the remarkable fact had been noticed that two streptococci of the same initial virulence might show great differences in the ease with which the virulence could be increased by passage through rabbits. An attempt was now being made at the Jenner Institute of Preventive Medicine to prepare a poly-virulent serum by using streptococci obtained from different sources. In using anti-streptococcic serum it was advisable as far as practicable to make the injections at the site of infection.

Dr. E. W. GOODALL had tried the serum in a certain number of cases of severe malignant scarlet fever but without observing any benefit. He pointed out that such cases occasionally recovered with ordinary treatment, so that too much importance must not be attached to the occasional recovery of a case after the use of the serum. He mentioned one severe case of phlegmonous inflammation of the fauces in which he had employed the serum with apparently great benefit. There was much œdematous swelling with high fever and delirium. The temperature fell to normal in two or three days, the swelling subsided, and the patient recovered. Such a condition following scarlet fever was rare, but it was very fatal. In this case the diphtheria antitoxin had been used without benefit. It was thought by some that streptococci played an important rôle in some severe cases of diphtheria, but Dr. Goodall did not think there was sufficient evidence of this to call for the use of the two serums together in such cases.

Dr. H. A. CALEY alluded to cases of infective endocarditis in which anti-streptococcic serum had been given with negative results and to a case of endocarditis of a subacute type in which it appeared to be of service. The variable clinical course of erysipelas made it difficult to gauge the effect of any particular therapeutic measures. Occasionally, however, the serum appeared to exercise a definite beneficial action and he gave particulars of a severe case of facial erysipelas in which the administration of each dose of the serum was followed by marked improvement, the patient subsequently making a good recovery. It was noteworthy that some of the recorded instances in which the serum appeared to have been of conspicuous value were cases of recent septic infection associated with a definite local lesion and that the administration of the serum was employed in conjunction with local measures at the site of the primary lesion.

Dr. G. F. BLACKER was interested to hear Dr. Washbourn's opinion, opposed as it was to the conclusions arrived at by Dr. Herbert Spencer in his report to the British Medical Association this year and to the report of the sub-committee of the New York Gynæcological Society. The question was an exceedingly difficult one to decide, since it was difficult to say at the onset of a case of acute infection whether the case was going to run a severe or a mild course, and the total mortality of cases of puerperal infection was not more than from 5 to 8 per cent. Dr. Blacker's own experience of the serum had been entirely disappointing. Many of the cases recorded were worthless from the absence of any bacteriological examination and many cases of puerperal infection were due to a mixed infection which the serum could not be expected to influence.

Dr. W. EWART briefly referred to his experience with the serum. In a very severe case of infective fever in which the streptococcus was found in the blood marked improvement was observed after each injection and the patient recovered. In cases of endocarditis and of erysipelas the serum had not proved successful, and in a case of fœtid bronchitis no improvement had taken place in the patient's condition or in the expectoration.

Dr. WASHBOURN, in reply, stated that he had noticed the same fact with regard to the pneumococcus as Dr. Dean had observed in the streptococcus—viz., that two organisms might differ widely in the ease with which their virulence might be increased by passage through animals. The varying results obtained in the treatment of ulcerative endocarditis with anti-streptococcic serum might partly be accounted for by the fact that not all cases were due to a streptococcic infection—some were caused by the pneumococcus and others, again, by the staphylococcus. He had used a very powerful anti-pneumococcic serum, which could now be obtained, with success in a case of pneumonia following influenza. Dr. Washbourn did not agree with Dr. Blacker as to the mixed infection in cases of puerperal fever. The discharges might certainly contain many organisms, but the lesions were, he believed, due only to the streptococcus.

SOCIETY OF ANÆSTHETISTS.

The Relationship between the Use of Anæsthetics and Insanity.

A MEETING of this society was held on Nov. 3rd, Dr. J. F. W. SILK, President, being in the chair.

Dr. G. H. SAVAGE read a paper on the Relationship between the Use of Anæsthetics and Insanity. He divided the subject, first, as to anæsthetics as causes of insanity; secondly, the forms of insanity which followed the use of anæsthetics as well as the form of anæsthetic administered; and, next, the effects of anæsthetics on those already insane and on the highly neurotic and those who had had previous attacks of insanity. He pointed out that any drug which produced temporary mental disorder might produce disorder of a more lasting nature. Anæsthetics producing delirium might give rise to mania or, producing insensibility, they might cause stupor and mental confusion. Anæsthetics rarely produced insanity except in patients who had had previous attacks or who were predisposed by exhaustion or allied states. Anæsthetics alone might produce insanity or the production might depend upon the operation and the anæsthetic. In some cases insanity had followed the administration of an anæsthetic and the application of some dressing such as iodoform. Dr. Savage did not think that one anæsthetic was more likely to cause mental disorder than another, as he had seen mania following the administration of gas for slight dental operations. In a certain number of cases he had seen insanity following the administration of anæsthetics during childbirth. He had scarcely ever seen simple melancholia or delusional insanity following the use of anæsthetics, but stupor lasting for some weeks had occurred in several cases, and he was inclined to think that greater risk of such disturbance followed the use of anæsthetics in operations about the bladder and rectum than in other operations. The administration of anæsthetics to patients who were subject to recurring attacks of insanity was associated with considerable danger, and examples were given to prove this. Dr. Savage also gave some examples of the re-development of mental symptoms which were passing off when an anæsthetic was given to a convalescing patient. In his experience little or no danger resulted from the administration of anæsthetics to those who were already insane, and he maintained that it was rather a question for the surgeon than for anyone else as to whether an operation should be performed on an insane patient. Naturally in maniacal cases it would be risky to perform any operation. As far as the treatment of insanity by the administration of anæsthetics was concerned he could only say that it had failed in all cases. Maniacal patients, though quiet at the time, returned to their maniacal excitement as soon as the anæsthetic was removed and sleep produced by anæsthetics was temporary and of little service. In a few cases of extreme weakness following maniacal excitement it was of service. Therefore he could only in summing up say that anæsthetics, though they might cause insanity, might relieve for a short time if given to the insane; that there was great danger to patients who had had previous attacks or who were very unstable; but that the administration of anæsthetics to the insane might be looked upon as harmless.

In the discussion that followed Mr. WALTER TYRRELL related the case of a little girl who after coming round from the effects of chloroform and being reasonable for an appreciable time gradually fell into a state of stupor in which she remained for three days. At the end of that time she

suddenly awoke as if from a dream and she had remained quite herself since.

Mrs. SCHARLIEB instanced the case of a woman who on two occasions became temporarily insane after the administration of an anæsthetic. Some of her delusions still persisted.

Dr. TURLE BAKEWELL related a case in which insanity followed the use of an anæsthetic in an operation for oöphorectomy on a girl who had previously suffered from mental disturbances.

Mr. HENRY DAVIS had met with a case of delirious excitement bordering on mania.

Mr. H. C. CROUCH related a case which after the administration of gas and ether for a dental operation the patient became violently delirious and gradually passed into a state of dementia from which he never recovered, but eventually died in an asylum. All the children of this man developed neurotic taints.

The PRESIDENT thought that there was some association between the delirium after ether anæsthesia and the absence of vomiting. He had seen several cases of mania following excision of the rectum.

Dr. SAVAGE, in reply, pointed out that when the intellectual level of the patient had been reduced by an anæsthetic any delusion which might be developed was apt to persist as a kind of mental scar. He thought that cases of temporary delirium might be looked upon as connecting links in the following series: loss of consciousness, loss of higher control, delirious conceptions, and mania. Melancholic exhibitions were unusual after anæsthesia, except, perhaps, in those who had previously suffered from melancholia.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Foreign Body in the Eye.—Follicular Conjunctivitis.

A MEETING of this society was held on Nov. 2nd, Dr. A. BERNARD, Vice-President, being in the chair.

Mr. G. P. NEWBOLT read notes of a case of Cholecystotomy and exhibited the patient. The operation was performed five months previously and 70 small calculi were removed.

Mr. R. W. MURRAY showed a male child, aged 14 months, upon whom he had operated for Imperforate Anus. At the time of the operation the infant was one day old and on making the incision in the normal position of the anus meconium escaped per urethram. The attempt to find the lower end of the bowel was abandoned and left inguinal colotomy was performed. The subsequent progress of the case was satisfactory. At the present time the infant was well grown and in good health. The question Mr. Murray raised was whether anything further could be done for the child or must he be compelled to go through life with an artificial anus in the groin? Considering the great disadvantages the boy would suffer, especially when he became older, Mr. Murray suggested the advisability of opening the abdomen and endeavouring to bring down the present artificial anus, or some part of the large intestine, to the normal position of the anus. This he believed to be quite possible, considering that in intussusception the ileo-cæcal valve occasionally projected beyond the anus.—Mr. F. T. PAUL thought that drainage of the intestine in iliac colotomy was best effected by the use of a glass tube. In regard to the proposal to bring down the bowel to the region of the anus he feared the attempt would fail, as the bowel below the artificial anus would be atrophied, while to bring down the upper part of the sigmoid flexure would involve so much division of its mesentery as to risk the vitality of the cut end. He would advise either that it be left alone or that the proximal end of the bowel be separated and passed between the muscles of the abdominal wall for a couple of inches with the object of obtaining better control over the fæces.—Dr. HUBERT ARMSTRONG thought that an operation involving such grave dangers, and by no means absolutely necessary in order to prolong life, should not be performed until the patient was old enough to say for himself if he would take the risk.—Mr. THELWALL THOMAS thought it was a pity that the primary exploration for the rectum was abandoned; removal of the coccyx would have probably allowed the bowel to be reached. Now, however, an exploration through the artificial anus to determine the condition of the lower bowel became necessary and subsequent proceedings, if any, would be based on the knowledge thus acquired.—Mr. F. C. LARKIN, Mr. G. P. NEWBOLT, and Mr. RUSHTON PARKER spoke, and Mr. MURRAY replied.

Mr. RICHARD WILLIAMS read notes of a case of a Foreign Body (a piece of steel) in the Right Eye of a Boy, aged 15 years. The steel had entered the cornea at the upper and outer part and penetrated the iris at the periphery without injury to the lens. At first it was plainly visible behind the lens, but in an attempt at removal under an anæsthetic it disappeared during a violent attack of vomiting and had not been seen since. First attempts with x rays failed to discover the body, but ultimately a good skiagraph by Mr. Thurstan Holland showed its presence. The eye recovered perfectly and had normal vision, but later some turbidity of the vitreous came on, with slight deterioration of vision, and it was a question whether the rays had anything to do with this result. At present the eye was quiescent with vision = $\frac{6}{9}$.

Dr. K. A. GROSSMANN, Mr. C. H. B. SHEARS, and Mr. T. H. BICKERTON spoke.

Dr. K. A. GROSSMANN and Dr. M. LOEWENTHAL communicated a paper on an Endemic of Follicular Conjunctivitis in a Liverpool School. A case of advanced follicular conjunctivitis without marked subjective symptoms was accidentally discovered and led to an examination of all the children of the school. It was found that of 700 children 422 had follicular conjunctivitis = 60 per cent. Dr. Grossmann and Dr. Loewenthal described the appearances, symptoms, percentage of occurrence of the different stages, prognosis, treatment, and the differential diagnosis. Many patients were exhibited and microscopical sections were shown.—Mr. C. H. B. SHEARS said that in his experience follicular conjunctivitis was an extremely common affection in young people and was often accompanied by other signs of glandular activity, such as post-nasal adenoids and granular pharyngitis. Mr. Sydney Stephenson, a recognised authority, had examined the lids of nearly 15,000 children in all ranks of life and found enlarged follicles in over 80 per cent.; the majority of these children did not complain of their eyes in any way. While quite agreeing that there was no difficulty in distinguishing between the ordinary cases of follicular conjunctivitis and true granular lids, he thought that there were certain severe cases of follicular conjunctivitis which were very difficult, if not impossible, to differentiate from true granular lids and that only time and careful observation could clear up the diagnosis.—Dr. J. H. ABRAM and Mr. T. H. BICKERTON also spoke.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Plague Toxins and Atropine.—The Jigger Parasite.

A MEETING of this society was held in the University Library on August 25th, Lieutenant-Colonel W. K. HATCH, I.M.S., being in the chair.

Dr. R. ROW read a paper on the Influence of Atropine on the Action of Plague Toxins as seen from Physiological, Pathological, and Clinical Observations. In the study of the physiological action of plague toxins on the blood-pressure and respirations of the cat he found a well-marked fall of the blood pressure on the administration of very small doses of the toxins intravenously. It seemed as if this was the result of a specific action of the plague toxins on the cardio-inhibitory mechanism transmitted down the vagi nerves and he was thereupon led to try the effect of the administration of atropine which paralyses the cardio-inhibitory nerves. Tracings were exhibited from which it appeared that an intravenous injection of plague toxins immediately after an intravenous injection of $\frac{1}{75}$ grain of atropine was followed by a considerable fall in the blood-pressure, but when the injection of plague toxins was given 20 minutes after the atropine there was no fall in the blood-pressure. Inoculation experiments on rats showed that an injection of 0·5 cubic centimetre of plague culture fluid killed a rat in 96 hours but the animal recovered if $\frac{1}{150}$ grain of atropine was given at the time. The animal also recovered after an injection of 0·7 cubic centimetre of plague culture + $\frac{1}{75}$ grain of atropine. Rats killed by 1·2 or 1·5 cubic centimetres of plague culture + $\frac{1}{75}$ grain of atropine always survived longer than the control—i.e., non-atropinised—rats. In all control animals the heart blood

was crowded with barrel-shaped bacilli with well-marked bipolar stain, but in animals more or less protected the bacilli, while giving genuine plague cultures in artificial media, when examined fresh appeared thin and withered, with a very feeble bipolar stain or none at all. Dr. Row had had an opportunity of trying the treatment clinically, but details were purposely held back at this stage of the research as the number of cases was not large. The results so far were very promising. In the buboes pus was absent, but the whole gland seemed to have undergone a coagulation necrosis, in producing which the force of the toxins had apparently spent itself so that the disease became localised. The atropine treatment was contra-indicated when bronchitis or pneumonia occurred as complications.

Mr. R. M. KALAPESI read a paper on the Insect Parasite known as Jigger or Chigoe or Sandflea (Pulex penetrans or Sarcopsylla penetrans). It is a native of the West Indies, and has been imported into Africa, whence it has recently been conveyed to India. The insect is only just visible to the naked eye, but the impregnated female expands enormously, generally to the size of a pea, when full of ova. She makes her breeding-place under the skin of human beings, monkeys, mice, fowls, and birds. In man the toes are the part most liable to be attacked, the lesions produced being small painful pustules. If the parasite is not properly removed it may produce extensive ulceration.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The third meeting of this society was held on Nov. 2nd in the Southern Medical Club, 18, South Portland-street, when Dr. Hugh Kelly delivered his presidential address. The subject matter chosen was Remarks on Tuberculosis—a review and synopsis of the information obtained in the series of meetings held during the previous session on the question of the prevention of tuberculosis. Speaking of the causation of tuberculosis Dr. Kelly referred to the various modes of communication that had been discussed—viz., *direct*, as by the introduction of the tubercle bacillus into the body by means of food and by the inhalation of the desiccated sputum of tuberculous persons; and *indirect*, as hereditary predisposition, enfeebling diseases, overcrowding in houses and districts, insanitary dwellings, workshops, and occupations, and certain conditions of climate, soil, &c. The salient points under each head were concisely reviewed by Dr. Kelly who made special reference to the occurrence of tuberculosis in domestic animals. The susceptibility of the cow when housed in insanitary dwellings was dwelt upon and from various authorities he showed that milk was a common vehicle for bacilli when the udders were diseased. Dr. Kelly then proceeded to summarise the opinions of those who took part in the discussion relative to prevention. From tuberculous meat it was shown that by proper inspection and cooking the danger was slight. But as danger did exist it could be minimised by rearing cattle in healthy surroundings, notably by the construction of hygienic byres, due care in feeding, by periodical testing with tuberculin, and the weeding out of reacting animals. The lungs should always be attached to imported carcasses, all animals should be bought in the open market subject to the tuberculin test, skilled inspectors should examine the carcasses of all slaughtered animals, and the Berlin system of boiling suspicious portions should be adopted. As regards milk it was recommended that there should be absolute cleanliness of the udders and utensils during milking. If for city consumption the milk should be sealed up and thus avoid exposure during transit. Dairy-keepers should be registered and control exercised over them and their families in case of illness. The same supervision might be extended to farmers. Herds should be inspected by qualified veterinary inspectors. Milk from any animal reacting to the tuberculin test should be rejected or at least boiled before consumption, and milk from any cows suffering from any disease of the udders should not be used at all. Until precautions such as these had become general Dr. Kelly maintained that for family use milk should be always boiled. Regarding the danger from sputum, patients suffering from pulmonary tuberculosis should be instructed how to render their expectoration innocuous, and disinfection of clothing, bedding, and houses of persons should be practised, especially when the case has become fatal. Regulations should be made by civil authorities to prevent overcrowding and more open spaces in towns should be provided. The Nordrach treatment was next alluded to and recommended by Dr Kelly who remarked that there were many places in this country where the same beneficent results could be obtained. In conclusion Dr. Kelly read a copy of the Dairies, Cowsheds, and Milkshops Order of 1899, just issued by the Local Government Board. In this order the important step is taken that Article 15 of the Dairies, Cowsheds, and Milkshops Order of 1885 is amended in the order of 1899 so that the word "disease" in the Contagious Diseases (Animals) Act, 1878, shall extend to, and include, "tubercle."—On the motion of Professor T. McCall Anderson a hearty vote of thanks was given to Dr. Kelly for his address.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At the annual general meeting of this society on Oct. 27th, Dr. Barclay J. Baron, the President, being in the chair, Dr. Dundas Grant read notes of a case of Sudden Nerve-deafness of the Right Ear in a woman, aged 40 years. Prior to the attack the patient had menorrhagia and diarrhœa with passage of blood from the bowel, and following the deafness she suffered from vertigo and nausea. The loss of hearing was chiefly for tones of the middle pitch. There were diminution of the pharyngeal reflex, exaggerated knee-jerk, and comparative hemianæsthesia. The condition might have been due to Ménière's disease, to anæmia of the auditory nerve, or to hysteria. The hearing soon improved and had become nearly normal.—Comments upon the case were made by the President, Mr. V. H. Wyatt Wingrave, Dr. S. Mackintosh, Dr. F. J. Tresilian, and Dr. W. D. Haslam.—Dr. Dundas Grant replied.—Dr. Dundas Grant showed a microscopical section of an Epithelioma from the Temporal Bone of a Male Patient, aged 45 years. The symptoms simulated necrosis of the temporal bone. A mastoid operation was performed with considerable relief, though the disease was slowly extending.—Mr. John Bark remarked that he had lately seen an almost similar case with rapidly recurring aural polypi.—Mr. Wyatt Wingrave thought that the growth commenced in an epidermal region.—The President delivered an address upon the Correlation of General Medicine and Laryngology, Rhinology, and Otology.—The President showed a case of Double Uvula in a Child associated with a Curious Defect of Speech.—Mr. Wyatt Wingrave considered the case to be one of cleft palate and that the defective articulation was due to a different condition.—Dr. E. Dennis Vinrace, Mr. J. Bark, Mr. St. George Reid, and Dr. F. J. Tresilian also spoke.—Dr. Peter Abercrombie again showed a case of Laryngeal Papilloma, exhibited at the meeting held in April. Since then the tonsils and adenoids had been removed and the growth had afterwards been treated with astringents. The growth was now much diminished in size.—Dr. W. MacNeill Whistler showed an Instrument for Gauging the Antero-posterior Length of Nasal Spurs.—Mr. St. George Reid showed, for Dr. Arthur W. Orwin, an Apparatus for Applying Continuous Heat to Different Regions of the Body.—Dr. F. J. Tresilian showed a case of New Growth in the Left Maxillary Antrum of a Child which produced considerable hard swelling of the left cheek.—A discussion ensued as to the seat and nature of the growth.—Dr. F. J. Tresilian read notes of (1) a case of Anosmia following Head Injury; and (2) a case of severe Bilateral Acute Otitis with Facial Erysipelas.—Mr. W. J. C. Nourse showed, for Dr. Percy Jakins, a case of Malignant Growth of the Larynx in a phthisical patient.—Mr. Wyatt Wingrave showed a case of Suppuration of the Maxillary Antrum. Persistent pain and discharge from the left nostril had followed the extraction of an upper molar tooth 12 months before. On examination a small opening was found at that site through which a fine probe could be passed into the left nostril. The opening into the alveolus was enlarged with a drill and fœtid pus was evacuated.—Mr. Wyatt Wingrave also showed a woman from whose left ear he had removed an Ivory Exostosis with a drill trephine. The deafness from which she previously suffered was relieved.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, Dr. T. Beattie being in the chair. The following officers were elected for the session 1899-1900:—President: Dr. H. Brunton Angus. Vice-President: Dr. Frank Hawthorn. Treasurer: Dr. O. Watson Ogden. Secretary: Dr. Wilfred E. Alderson. Committee: Dr. T. Beattie (retiring president), Dr. John Clay, Dr. A. M. Martin, and Mr. T. G. Ouston.—Dr. Martin exhibited a boy, aged 10 years, with Left Coxa Vara. There was a history of an injury three

years ago, since which time a gradually increasing limp, unaccompanied by pain or tenderness, had developed. The limb on the affected side measured three-quarters of an inch less in the extended position. The diagnosis was made by excluding morbus coxæ and congenital dislocation of the hip and by observing other evidences of rickets. The treatment consisted in the usual treatment of rickets and the patient had to wear a boot with a sole thickened to compensate for the shortening of the limb.—Dr. Martin also showed a man with a typical Hunterian chancre on the upper lip of six weeks' duration. There was enlargement of the sub-mental lymphatic glands. No secondary manifestations were yet evident.—Dr. Beattie who had had considerable opportunities for observing extra-genital chancres, strongly urged the difficulty in diagnosis and deprecated the administration of anti-syphilitic treatment until secondary symptoms became manifest.—Mr. W. H. Vickery showed a child aged five years, upon whom he had successfully performed Suprapubic Cystotomy for Stone. The stone was formed of uric acid and was of the size of a small haricot bean. The patient had instanced to a marked degree the sudden cessation of micturition due to occlusion of the urethral orifice of the bladder by the stone.—Dr. Beattie exhibited several pathological specimens showing the appearance of the Lungs in different Stages of Phthisis.—Dr. Alderson exhibited the Uterus and Kidneys of a woman, aged 21 years, who died from septic endometritis with suppurative nephritis 12 days after being delivered of a dead-born child in an advanced state of decomposition. No medical advice was sought till 48 hours before death, by which time the patient was already moribund. The cavity of the uterus was filled with foul-smelling pus, decomposing blood-clot, and adherent placental tissue. No pelvic peritonitis or cellulitis was found. The kidneys were surrounded by much perinephritic inflammation and points of pus were evident on the convexity of the cortex and throughout the cortical tissue.—The President showed a Ruptured Spleen which he had removed from a man. On the third day after the operation the patient developed pneumonia on the right side and died. Fatty changes in the liver and other organs were well marked.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 3rd, Dr. J. B. Ball, President, being in the chair.—A Native Enema Apparatus brought from the Upper Congo River, Central Africa, by Mr. W. D. Armstrong, was shown by Mr. McAdam Eccles. The instrument consisted of a medium sized calabash together with a small cane pipe, some three inches in length and of the size of an ordinary lead pencil, fixed into the smaller end of the calabash, the fluid being allowed to run into the rectum by hydrostatic pressure.—Dr. J. A. Mansell Moullin exhibited the Ovaries removed from a patient, aged 40 years; both ovaries were enlarged and the capsules were thickened, one containing a cyst of the size of a walnut.—Mr. John Pardoe read a paper entitled Some Modern Methods of Treatment in Chronic Urethritis. He said that great changes had taken place in the treatment of gleet during the past few years due to improved methods of diagnosis whereby they were enabled to treat the causes and not merely the symptoms of that trouble. For successful treatment accurate localisation of the seat of disease was essential. After explaining the methods in use which were best calculated to attain this object he proceeded to describe various modes of treatment which were most likely to cure the diseased condition of the urethra causing the gleet.—The paper was discussed by the President, Mr. Swinford Edwards, Mr. R. W. Lloyd, and Mr. L. A. Bidwell.—Mr. John Pardoe replied.—Mr. Swinford Edwards read a paper on Urinary Obstruction, with cases illustrating some of its causes. He said that obstruction to the free flow of urine arose either in the prepuce, the urethra, the prostate, or the bladder. The first case illustrating his remarks was one of stricture and impacted urethral calculus. The calculus was removed, after urethrotomy with Otis's instrument, with complete success, the patient being able to pass urine naturally for the first time for many years. The next case was that of a patient operated on by Mr. Swinford Edwards for stricture and perineal fistula. The last case narrated was that of a patient who suffered from obstruction due to enlarged prostate. Vasectomy was performed on one side with such an excellent result that it was proposed to perform at once the same operation on the opposite side.—The paper was discussed by the President, Mr. R. W. Lloyd, Mr. L. A. Bidwell, and Mr. John Pardoe.—Mr. Swinford Edwards replied.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Nov. 3rd, the President, Mr. A. W. Galloway, being in the chair.—Dr. Leslie Durno reported a case of Fatal Appendicitis in a girl, aged 18 years, who, after eating a hearty meal, was seized with severe abdominal pain and vomited. On the third day on her returning home the pulse was 120 per minute and the temperature was sub-normal. On the fourth day she seemed better and a consulting physician advised non-operative interference. On the sixth day vomiting returned with the violent abdominal pain and then the same physician advised operation. She died 15 minutes later.—Mr. H. J. Waring thought the case one of acute gangrenous appendicitis and for it early operation was the only treatment.—Mr. Waring showed a man who Accidentally Shot Himself with a Revolver in the left cheek. The bullet ploughed across the lingual base, from which there was much hæmorrhage which made its way into the right neck. Respiration was suspended while under an anæsthetic owing to hæmorrhage into the cellular tissue of the neck, so tracheotomy was done. Later the bullet was removed from over the right hyoid bone. Recovery was complete.—The President showed a Rodent Ulcer of 10 years' standing in a woman, aged 70 years, whose right eye was completely, and nose partially, destroyed.—Mr. D. H. Goodsall showed (1) a man with a Syphilitic Knee-joint and Ulceration of the Skin of the leg of 18 years' standing now much improved; and (2) a specimen of Vesical Hypertrophy due to old urethral stricture in a man, aged 65 years, whose prostatic middle lobe was so large that even a special sound did not detect the 125 calculi lying beyond.—Dr. R. Ostlere showed a full term Female Child with a Large Exomphalos.

Reviews and Notices of Books.

Pulmonary Tuberculosis: its Modern Prophylaxis and the Treatment in Special Institutions and at Home. By J. A. KNOPF, M.D., Physician to the Lung Department of the New York Throat and Nose Hospital. Illustrated. Philadelphia: J. Blakiston's Son and Co. 1899. Pp. 343.

THIS work formed the Alvarenga prize essay of the College of Physicians of Philadelphia for the year 1898, but for the purposes of publication in book form it has been revised and enlarged.

Commencing with some interesting data in the history of tuberculosis and some statistics in relation to the mortality from tuberculosis, the author proceeds to discuss the pathological proofs of the curability of pulmonary tuberculosis and to offer some remarks on public prophylaxis in regard to tuberculosis in man. These various chapters are well put together and form a good summary of our present knowledge of tuberculosis.

The seventh chapter, headed "Preventive Treatment," contains, however, more original matter and deserves much attention on the part of practitioners, especially of those engaged in general practice. According to the modern views on heredity it is the weak resisting power to tuberculous infection which is transmitted and not the disease itself. By the adoption of suitable precautions much may be done to minimise the chances of infection and also to brace up the organism generally so as to make the tissues an unsuitable pabulum for the growth of the pathogenic bacillus. It is well known that the parts of the lungs most likely to be attacked are those in which expansion is naturally the least, and in weakly individuals the tendency not to inflate the lungs properly is very marked. Physicians who have large experience in diseases of the chest know how comparatively few persons expand the chest as they should. Some of the common affections of childhood, more especially adenoid growths in the naso-pharynx, add greatly to the want of proper expansion of the lungs. Dr. Knopf therefore very

rightly lays great stress on the importance of breathing exercises for all children, especially those who may be considered to be predisposed to pulmonary tuberculosis. He describes certain exercises which may be advantageously adopted and there are many others which might be carried out in schools as part of the daily routine with a beneficial result to the scholars.

The author then proceeds to describe visits to some of the most important sanatoria and special hospitals of Europe. Many of these must have been made several years ago. For instance, the Brompton Hospital is described in the condition in which it was 15 years ago, whilst only a few lines are devoted to the discussion of Nordrach and its sanatorium.

Passing on, however, to other chapters we again find many useful and instructive suggestions. The plan of treatment adopted by Dr. Knopf is one which would be well suited to this country—plenty of good food, a suitable amount of exercise, and, what is even more important, a carefully regulated "rest-cure," not carried to the extent that it is in some of the continental resorts, but carried out in a systematic and practical manner. The amount of exposure to "open-air" is also carefully discussed and the extremes to which some authorities would wish to carry the principle are sensibly modified.

Chapters are also devoted to the Treatment of Ambulant Tuberculous Patients in Private and Dispensary Practice and to the Treatment of Consumptives at their Homes. Many useful hints are given in these matters. The book as a whole is well worthy of perusal and we can recommend it to the attention of our readers.

Enlargement of the Prostate: Its Treatment and Radical Cure. By C. MANSELL MOULLIN, M.D. Oxon., F.R.C.S. Eng., Surgeon to, and Lecturer of Surgery at, the London Hospital, &c. Second edition. London: H. K. Lewis. 1899. Pp. 211. 8vo. Price 6s.

THE favourable opinion which we were able to express of the first edition of this work is even more deserved by the second edition. The book has been increased by some 40 pages, the type is larger, and to this a small part of the increase in size must be attributed. Valuable additions have been made to almost every chapter, but the greatest increase is to be found in Chapter III., which deals with the causes of prostatic enlargement, and Chapter XI., in which is discussed the value in prostatic enlargement of the removal of one testis or of both testes. Mr. Moullin acknowledges that none of the explanations at present given of the cause of enlarged prostate is entirely satisfactory, and though he is unable to offer any perfect solution of the problem he is inclined to think that it is connected with the influence exerted by the testes on the growth and nutrition of the accessory organs, such as the prostate and vesiculæ seminales. As to the mode of connexion between these structures he does not express any decided opinion, but thinks it may be nervous in nature or the effect of an unknown chemical substance secreted by the testicle. The author quotes an important case which he recorded in THE LANCET in 1896.[1] A man, who was a monorchid almost from birth, for one testis had been destroyed at a very early age, suffered from a median enlargement of the prostate which caused serious obstruction to the outflow of urine. In the chapter on the Treatment of Prostatic Enlargement by Removal of the Testes we note that Mr. Moullin has replaced the word "castration" which was used in the first edition by the term "orchidectomy." He speaks very definitely of the diminution in size of the prostate which followed in every one of his cases in which both testes were removed, and in the majority of the cases the bladder was able to empty itself fairly completely. In two only has there been little or no change for the better in this respect. The mortality has, up to the present, been two out of 17 cases; neither of these deaths, however, seemed to be directly dependent on the operation. The author has never met with any of the severe mental disturbances which have been observed by other surgeons to follow this operation. The incision advised is placed over the external abdominal ring, where it is far easier to keep the wound aseptic than if made in the scrotum. Unilateral orchidectomy may reasonably be tried in cases in which one lateral lobe is much larger than the other, but it will almost certainly have to be followed by removal of the other testis. Ligature of the vas deferens is in Mr. Moullin's opinion much less satisfactory than orchidectomy, but it may be used in cases where the patient refuses to submit to the major operation and also in cases where a general anæsthetic is not desirable, for it may be performed under the influence of cocaine.

[1] THE LANCET, Feb. 1st, 1896, p. 288.

Lehrbuch der Kinderkrankheiten Für Aerzte und Studirende. Von Professor Dr. ADOLF BAGINSKY. (*Manual of the Diseases of Children.* For Practitioners and Students. By Professor ADOLF BAGINSKY.) Sixth edition. Brunswick: Friedrich Wreden. 1899. Imperial 8vo. Pp. 1008.

THIS work on children's diseases, which constitutes the sixth volume of the Wreden collection of medical handbooks, may be divided into two parts—the one the more general and the other the special as it includes the description of individual diseases. Its popularity is abundantly evident by its having already reached a sixth edition and Professor Baginsky, its well-known author, is to be congratulated on its success.

Disease as it is seen in children occupies the chief attention of the author and yet comparatively few diseases are altogether excluded even when they are rare and therefore of smaller moment so far as the child is concerned. The reader naturally turns to the more general remarks on children's ailments, as here the author's long and varied experience in examining and treating children should be of special service. The peculiarities of the child from the physiological and therapeutical standpoint are well set out. Professor Baginsky divides the period of life with which he deals into (1) that of the newly born up to the third or fourth week, (2) that of infancy up to the end of the first year; (3) that of early childhood up to the end of the sixth or seventh year, and (4) that of later childhood up to the end of the fourteenth year. The pulse and its variations in disease and especially in some nervous diseases are carefully noted. The disproportionate length of the alimentary canal to that of the body is mentioned as a possible explanation of the child's capacity for digesting milk which is twice as great as that of the adult. The question of weight is fully discussed and the importance of repeatedly weighing the child in order to ascertain progress is emphasised. In the section on the care and feeding of the infant considerable attention is necessarily given to artificial feeding, the value of possible additions to the milk and of chemically and physically altered milk being carefully discussed. Soxhlet's apparatus is warmly commended for the sterilisation of milk. A useful table of diets for the healthy and the febrile child from one and a half years up to 14 years will be found on pages 30 and 31. The difficulties of gaining information about the young child are in large measure met by the excellent description here given of the various points to be observed in the examination. In the short section on therapeutical considerations the author draws special attention to the idiosyncracies of children to certain drugs. Thus a special warning is given with regard to antipyretics whereas the application of cold in the shape of packs or even the cold bath is advocated. As regards

dosage, from one-fifteenth to one-twelfth of the adult dose is recommended during the first year, from one-eighth to one-quarter during the second and third years, and from one-third to one-half during the fourth to the seventh year.

The interesting section on diseases of the newly born child includes amongst other diseases those of the navel, icterus neonatorum, and melæna. The pathology of the last-named affection remains as obscure as ever. The acute infective diseases claim a very considerable space and the description of them is in every sense satisfactory. Their symptoms are often conveniently described under the headings of a normal and abnormal course. Professor Baginsky has convinced himself of the inefficacy of Marmorek's serum in scarlet fever. The washing out the throat now so very generally adopted in so-called septic scarlet fever finds no mention here. Under measles the author says that he has not been able to convince himself of the constancy of Koplik's symptom in all cases. Since the general introduction of vaccination he states that variola has largely lost its importance in childhood, that since 1871 he has not seen a case of genuine variola, and that even modified small-pox is rare. Attention is drawn to the frequency of typhoid fever in childhood and to the rarity of perforation. The cold bath is deprecated in the treatment of this disease in the child. The author has presumably little sympathy with those who under well-defined conditions would allow a more generous diet to patients suffering from typhoid fever, as he makes no mention of it. The excellent article on diphtheria follows the same lines as the author's recent monograph belonging to Nothnagel's Handbook. Perhaps hardly as much space is allotted to tuberculosis as the recent attention given to this subject would lead us to expect.

Diseases of the spinal cord and brain are adequately described. While recognising that authentic cases of recovery from tuberculous meningitis have been recorded the author says that he has never seen such a recovery. Operative treatment of cerebral tumours is regarded as rarely promising success, partly on account of the multiple character of these growths. Although admitting the presence in the spinal cord of well-defined vascular lesions in infantile paralysis and also the occasional occurrence of epidemics of this disease Professor Baginsky does not admit that the ordinary cases are infective in character. Under respiratory diseases a non-diphtheritic form of membranous laryngitis is described. The lobar form of pneumonia is apparently looked upon as being more common in children than current views would suggest.

In the section on cardiac disease congenital malformations of the heart receive much attention. A full account of pericarditis is given and also of myocarditis, but chronic valvular disease is very briefly dealt with. In alimentary diseases a diphtheritic form of stomatitis is recognised. In the treatment of several forms of stomatitis, including thrush, permanganate of potassium is preferred to other local remedies. Much attention is given to the gastro-intestinal affections of children. As regards the operative treatment of appendicitis Professor Baginsky holds that every case must be treated on its own merits, but that the favourable moment for operation must not be allowed to slip by. The author has never seen during life or after death a genuine and unmistakeable case of gall-stone disease in childhood.

Genito-urinary diseases include Addison's disease and diseases of the kidney, ureter, bladder, urethra, and testes. The morbid anatomy of renal tumours is very briefly given, and yet the prognosis after nephrectomy must largely depend on the pathological characters of these growths. A short account of diseases of the female generative organs as seen in children follows. The description of the diseases of the eye and ear is necessarily short, but skin diseases are dealt with at greater length. The work closes with a short account of vertebral diseases, especially caries of the spine. There are two useful appendices, the one giving the doses of remedies most often used in children's diseases and the other convenient prescriptions in which such remedies may be ordered.

It is impossible to read through Professor Baginsky's work without being struck by the great experience and knowledge of the author. The descriptions contained in it are clear, concise, and practical. It is a book that the more experienced as well as the beginner may read with advantage and profit.

Practical Sanitation. By GEORGE REID, M.D., D.P.H. Aberd., Medical Officer, Staffordshire County Council, &c. Fifth edition. Revised. London: Charles Griffin and Co. 1899. Pp. 344.

WE owe Dr. Reid an apology for having somewhat delayed noticing the fifth edition of his eminently practical book. The fifth edition of a work needs no lengthy notice. On looking through it to see what is Dr. Reid's opinion of some of the more recent developments of hygiene we light (p. 109 *et seq*) on the *pros* and *cons* of slop-closets. The sewage in places where slop-closets are used is necessarily very concentrated and correspondingly liable to putrefaction, and Dr. Reid gives the results of an actual experiment carried out with 59 houses in a town in Staffordshire. He says: "In conclusion, I have given it as my opinion that land treatment will be necessary if slop closets are introduced, but even then I am by no means certain, from a sewage-disposal point of view, that no risk would be incurred, as, besides the concentrated quality of the sewage, there are other objections, not the least of which is the tendency to rapid putrefaction—a consideration which would not only increase the difficulty even of land-disposal, but which, I very much fear, would render still more difficult the vexed question of sewer ventilation."

Interesting particulars are given as to the effect of frost on out-door closets in two towns in Staffordshire, in which 157 and 201 closets respectively were rendered temporarily useless by frost in 1895 (and presumably causing difficulties in excrement removal to at least 1790 persons, counting five to a closet). In these 358 cases the pans were frozen in every case. The supply-pipes were frozen in 315 cases and the cisterns in 292 cases. The book well deserves its success.

LIBRARY TABLE.

The Exploration of the Urethra and Bladder. By M. TUCHMANN, M.R.C.S. Eng., M.D. Würzburg, formerly Surgeon to Out-patients, German Hospital, Dalston. With 26 Illustrations. London: H. K. Lewis. 1899. 8vo. Pp. 56. Price 5*s*.—Some 12 years ago Dr. Tuchmann published in German a pamphlet on this subject and the present volume may be looked upon as a second edition in English of that work. The author has made very many careful researches on the subjects dealt with in this book and we may give a brief summary of the more important of his conclusions. The natural inclination of the pelvic brim must have an important influence on the position of the urethra and therefore on the passing of catheters and other urethral instruments. The plane of the brim is usually said to be inclined at an angle of 60 degrees to the horizontal and Kohlrausch has stated that it varies from 50 to 70 degrees. Dr. Tuchmann has found very great variations in this angle. In some the brim has been almost vertical, while in others it was not far from the horizontal. Another result at which the author has arrived from the passage of catheters on dead bodies is that when an ordinary metal catheter is introduced into the urethra, the body lying horizontally, and the shaft of the instrument has been brought into a vertical position, the point of the instrument has already reached the bladder and then a very slight depression of the shaft will introduce

the beak of the catheter further into the bladder. Dr. Tuchmann invented some time ago a pair of forceps for closing either ureter so as to collect separately the urine of each kidney; in its present form it is like a lithotrite, but the blades are held together by a spiral spring and they are hollow to transmit the urine. It is an ingenious instrument, but its successful use requires much manipulative skill on the part of the surgeon. The author has made numerous experiments on himself as to the various circumstances which influence the employment of instruments on the urethra and bladder and has arrived at valuable conclusions, assisted as he was by the sensations which he experienced. The book is well worth reading by all who are interested in the surgery of the urinary organs, and though we are not inclined to accept all Dr. Tuchmann's conclusions yet there is much that is of value in what he has written.

A Directory of the Dissection of the Human Body. By JOHN CLELAND, M.D. Edin., LL.D. St. And., F.R.S., Professor of Anatomy in the University of Glasgow, and JOHN YULE MACKAY, M.D. Glasg., Principal and Professor of Anatomy, University College, Dundee, the University of St. Andrews. Fourth edition. Glasgow: James Maclehose and Sons. 1898. Pp. 198. Price 5*s.*—It has always been found a difficult matter to write a good guide to dissecting and the usual tendency has been to include in it much that had been better left to the text-book of anatomy, for the student should not occupy his time in the dissecting-room with reading elaborate accounts of the anatomy of the structures which lie before him, but he should both before and after his dissection refer to the systematic treatises on anatomy, and this reference has been rendered specially easy in this little book by the page in the authors' work on Human Anatomy being quoted after each structure mentioned. The appearance of a fourth edition is evidence that there exists already a large demand for the book, but it deserves to be known and used still more widely.

The Ready Reference Handbook of Diseases of the Skin. By GEORGE THOMAS JACKSON, M.D. Colorado, Professor of Dermatology in the Women's Medical College of the New York Infirmary and in the Medical Department of the University of Vermont, &c. With 75 Illustrations. Third edition, revised and enlarged. London: Henry Kimpton. 1899. Pp. 647. 8vo. Price 10*s.* 6*d.* net.—In this work the diseases of the skin are arranged alphabetically and there are very numerous cross references, so that the student or practitioner can at once refer to any skin disease about which he may desire information. The third edition has been revised, several sections have been entirely rewritten, and six new illustrations have been added. The names of the diseases have their phonetic equivalents given, and these should prove useful, but we must protest against the accent in elephantiasis being placed on the penultimate syllable. Most of the illustrations are from photographs and they are, as a rule, very successful in representing the diseases depicted. It is convenient for the reader to have the brief account of the anatomy and physiology of the skin with which the volume commences. Even those who are conversant with the literature of dermatology will be likely to learn something from this admirable little work.

The Story of Eclipses, Simply Told for General Readers. By GEORGE F. CHAMBERS, F.R.A.S. London: George Newnes, Limited. 1899. Pp. 259. Price 1*s.*—Eclipses of the moon are comparatively frequent and possess only a moderate degree of scientific interest. Eclipses of the sun, on the other hand, are much less familiar phenomena owing to the limited areas in which they are visible; they differ greatly from those of the moon in not merely producing marvellous spectacular effects but in presenting rare opportunities for the investigation of the solar atmosphere. The last eclipse of the sun visible in Europe occurred on August 9th, 1896, and numerous astronomers proceeded to Norway for the purpose of observing it. The next will occur on May 28th, 1900, and will pass across Portugal and Spain. In anticipation of this event Mr. Chambers has written an excellent little manual in which the general reader will find full explanations of the causes of eclipses and even a simple method by which anybody may predict them from a set of old almanacs. The various towns in the Peninsula favourably situated for viewing the eclipse are also specified and tourists intending to make the journey will find some useful hints.

A Handbook of Anatomy for Art Students. By ARTHUR THOMSON, M.A. Oxon., M.B. Edin., Professor of Human Anatomy in the University of Oxford and Lecturer on Anatomy in the National Art Training School, South Kensington. Second edition. Oxford: At the Clarendon Press. 1899. Price 16*s.*—So excellent was the first edition of Professor Thomson's book that this, the second edition, can only be said to be an improvement on the former by reason of the additional plates. We need not repeat all that we said when speaking of the first edition[1] except in so far that the additional plates strengthen our opinion as to how much anatomy could be learned from a study of the nude well-developed male figure. Take, for instance, the serratus magnus and the description of it given in one of the best modern books on anatomy (we omit the account of the origin of the first and second parts of the muscle). "Third part, by far the largest and strongest part of the muscle, arises from the fourth or fifth to the eighth or ninth ribs by a series of teeth, which are attached in front near the upper border of each rib and behind to a line running backwards across the outer surface of the rib from its upper to its lower border. These attachments form a curved line with the convexity forwards, the attachment to the sixth rib being the most anterior and prominent." Of course, all this can be seen after a careful dissection, but the student could easily get a plain mental picture of a portion of this muscle by looking at Plates XXIII., XXXVII., and XL., or still better by studying the muscle on a companion and putting it into action in accordance with these plates. The average student neglects surface anatomy as shown on the living body and is too apt to think that anatomy can only be learned from the dead body. A study of Professor Thomson's book will show him how wrong he is in this idea. The printing and paper of the book, as we should expect considering the reputation of the Clarendon Press, are excellent.

South African Health Resorts: the Voyage to South Africa and Sojourn There. London: Messrs. Donald Currie and Co. Pp. 145. 1899.—This little book is issued by the owners of the great Castle Line of steamships and is full of information as to South Africa and how to get there. Sundry chapters are written by medical men, notably the first on the Climate of South Africa by Dr. Alfred Hillier. Until the opening of the overland route, and more lately of the Suez Canal, the Cape was a favourite sanatorium for persons on the way home from India. For the moment, of course, circumstances have made the country an undesirable place for those in delicate health, but when the political unrest is allayed selected phthisical patients and those overworked might do a great deal worse than avail themselves of the facilities afforded by a Castle liner.

[1] THE LANCET, Nov. 7th, 1896, p. 1312.

POISONING BY PARAFFIN OIL.—An inquest was held on Nov. 3rd, at Swansea, upon a child who died from the effects of swallowing paraffin oil and a verdict of death through misadventure was returned.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) TABLOID GUAIACUM RESIN; AND (2) SOLOID INDICATORS.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, LONDON, E.C.)

GUAIACUM RESIN has long been employed in medicine as a stimulant, diaphoretic and alterative. It has been prescribed in chronic forms of rheumatism and is said to relieve tonsillitis and to be useful in dysmenorrhœa. The tabloid contains five grains of the resin and is practically tasteless.

The convenience of having at hand definite quantities of colouring agents which are used as indicators, more particularly in volumetric analysis, will be obvious to all those familiar with this method. Solutions of colour very often rapidly deteriorate, so that it is necessary, in order to gain reliable results, to prepare a solution of the indicator just before it is required. This preparation is considerably expedited by the use of a soloid indicator. We have examined such soloids composed of—as examples—indigo, carmine, lacmoid, methyl orange, phenolpthalein, and rosolic acid. The starch soloid will appeal as a special example of the suitability of the indicator in this form, since starch emulsion will not keep satisfactorily more than a day.

HUNGARIAN CHAMPAGNE.

(LITTKÈ AND CO., FÜNFKIRCHEN, HUNGARY. AGENTS: INGRAM AND ROYLE, EAST PAUL'S WHARF, UPPER THAMES-STREET, LONDON, E.C.)

Very excellent wine is produced in the vineyards of Hungary where almost as much study and attention have been given to viticulture as in France. Indeed, the Hungarian wine-growers have not been slow to profit by the experience of the experts in the various wine districts of France, and recently they have directed their attention to the production of a champagne which, as regards quality and character, should compare favourably with the well-known brands which are exported to England from the Champagne district. The grape which is used by the Hungarian grower for champagne-making is luscious and large and produces a very excellent sparkling wine with full yet delicate fruity flavour and possessing that pleasing fragrant character which is ascribed to the development of peculiar vinous ethers. The largest growers of champagne in Hungary are Messrs. Littkè, who export an immense amount out of, while providing enough for consumption in, their own country, where, however, the idea of excellence in regard to champagne does not quite coincide with our own. But that these growers have studied the English taste is evident from the examination and analysis we have made of some specimens recently submitted to us. We append the full analysis of two different kinds. Extra sec sans sucre: extractives, 1·45 per cent.; sugar, 0·10 per cent.; tartaric acid (fixed acids reckoned as tartaric acid), 0·71 per cent.; volatile acids reckoned as acetic acid, 0·08 per cent.; alcohol, by weight 9·36 per cent., by volume 11·61 per cent., equal to proof spirit 20·35 per cent.; alcohol in volatile ethers, 0·013 per cent.; alcohol in fixed ethers, 0·017 per cent.; and total alcohol in ethers, 0·03 per cent. Extra sec, 2 per cent.; extractives, 2·75 per cent.; sugar, 1·52 per cent.; fixed acids calculated as tartaric acid, 0·64 per cent.; volatile acids reckoned as acetic acid, 0·15 per cent.; alcohol, by weight 11·23 per cent., by volume 13·90 per cent., equal to proof spirit 24·36 per cent.; alcohol in volatile ethers, 0·0069 per cent.; alcohol in fixed ethers, 0·0327 per cent.; and total alcohol in ethers, 0·0396 per cent. The first wine is exceedingly dry and what the French call "brut"—that is, a wine in which the addition of liqueur has been omitted. We have not examined a specimen of champagne which contains so small and insignificant a proportion of saccharine substances. The wine possesses a remarkably delicate bouquet and is very "clean" on the palate. It clearly belongs to that class of wine which may be recommended to persons who are forbidden sugar in any form. The words "2 per cent." used in the title of the second wine probably refer to the quantity of liqueur added. The character of this wine is quite in accordance with the English taste. It is a fully developed wine with a pleasant ethereal character and keeps its effervescing quality well. The fact that these wines are so good and yet very moderate in price compared with the French wines suggests that they would serve admirably for hospital use. They are genuine wines possessing that powerful restorative quality for which champagne is so well known.

NORVRIL (FISH POWDER).

(J. AND J. W. K. LEIPER, 117, GT. WESTERN-ROAD, ABERDEEN.)

Norvril is a dry yellowish-white powder with marked fishy odour. On analysis it gave the following results: moisture, 8·35 per cent.; mineral matter, 6·00 per cent. (consisting entirely of phosphates); and proteids, 62·50 per cent., corresponding with 10 per cent. of nitrogen. The balance, 23·15 per cent., may be regarded as consisting of partly fat and partly extractives. On prolonged treatment with hot water a kind of fish soup is obtained after the manner of employing meat extracts for the same purpose. When prepared properly Norvril undoubtedly affords a nourishing soup and is probably of easy digestibility. It contains a very high proportion of flesh-forming proteids, but these in a large measure have been coagulated by the desiccating process. Before use the powder should be first softened by soaking in cold water.

DYLISSIA.

(DURANT AND CO., ROSEBERY-AVENUE, LONDON, E.C.)

The chief constituents found on analysis of this toilet cream were borax and oxide of zinc. The vehicle used is of excellent quality and well adapted for the office of an emollient. The cream is very agreeably scented. It is free from irritants and other objectionable substances and would appear to be suitable as a healing and sedative application for the skin.

NUTRIENT POWDER (DENCE'S PATENT).

(BRAND AND CO., 11, LITTLE STANHOPE-STREET, MAYFAIR, LONDON, W.)

We have often wondered that a preparation of this kind had not been introduced before. It consists simply of finely comminuted meat fibre dried at a low temperature so as to avoid the coagulation of the muscle proteid. (In proof of this statement we found that cold water extracted proteids from the powder which coagulated on boiling the extract.) It represents, in fact, as nearly as possible raw meat with the moisture withdrawn. Bearing these facts in mind, there can be little doubt of its nutrient value, especially for invalids and others. Our analysis furnished the following results: total proteid matter, 77·90 per cent.; mineral matter, 3·85 per cent.; fat, 5·64 per cent.; and moisture, 12·61 per cent. In the course of preparation all tough and stringy portions are rejected. We regard this powder as an addition of great importance to the dietary of the invalid.

COGNAC BRANDY (COURVOISIER).

(BOTTLED BY MARSHALL AND ELVY, 45, NEW OXFORD-STREET, LONDON, W.)

The specimens submitted were stated to be eight and 20 years old respectively. The former gave the following results on analysis: extractives, 1·30 per cent.; mineral matter, 0·02 per cent.; alcohol, by weight 36·56 per cent., by volume 43·56 per cent., equal to proof spirit 76·34 per cent.; acidity reckoned as acetic acid, 0·037 per cent.; and alcohol in ethers, 0·0165 per cent. The latter yielded results as follows: extractives, 1·14 per cent.; mineral matter, 0·02 per cent.; alcohol, by weight 36·00 per cent., by volume 42·95 per cent., equal to proof spirit 75·26 per

cent.; acidity reckoned as acetic acid, 0·049 per cent.; and alcohol in ethers, 0·02 per cent. These results show a somewhat low alcoholic strength, but the figures relating to the amount of ethers afford some evidence in favour of the brandies being distilled from wine. The specimen stated to be 20 years old was remarkably smooth and mellow and fragrant, though somewhat sweet to the taste. Its general characters are quite in keeping with the statement in regard to the time during which it has been stored. The eight years' old specimen also gave evidence of maturity and was quite free from any semblance of pungency. Both specimens are, we believe, genuine brandy and therefore suited for special dietetic requirements and for the purposes of a restorative in medical practice.

SPECIAL BREAD.

(BEALES, LIMITED, 370, 372, AND 374, HOLLOWAY-ROAD, LONDON, N.)

It is claimed that this bread is especially rich in phosphates and proteids. That our analysis endorses this claim is evident from the following results in which moisture is excluded: proteids, 13·26 per cent.; and mineral matter, 2·16 per cent. Part of this mineral matter consisted of common salt, but it contained a commendable proportion of the phosphates of wheat. The bread was of satisfactory texture and possessed a good rich wheaten flavour. We are always willing to accord praise to articles of food which, as in the case of bread, show a definite enrichment of the important alimentary constituents, the proteids and phosphates of wheat flour. Too often these indispensable food elements are reduced by modern machine methods.

CARNIGEN.

(LEETE AND O'CONNELL, ST. DUNSTAN'S-BUILDINGS, ST. DUNSTAN'S HILL, LONDON, E.C.)

Carnigen is a light yellowish crystalline powder which is rapidly soluble in cold water. The taste is rich and meaty and remarkably evanescent. According to our analysis the preparation is nearly pure peptone. The results were as follows: peptones with a small quantity of albumose and albumen, 86·20 per cent.; mineral matter (chiefly potassium phosphate), 7·07 per cent.; and moisture, 6·73 per cent. The solution readily responds to all the well-known tests for peptones, but gives only a slight turbidity with a saturated solution of sulphate of zinc, the reagent which precipitates albumose. The preparation, therefore, is a powerful nutrient, and being predigested requires but little effort of the digestive functions in order to be assimilated. It should prove an excellent adjuvant to invalid foods especially where the digestive functions are impaired.

New Inventions.

LÜER'S PATENT ASEPTIC SYRINGE.

WE have received from Messrs. Mackey, Mackey, and Co., Limited, of 175, Grange-road, Bermondsey, S.E., a sample of Lüer's patent aseptic syringe, an instrument very simple in construction, consisting of three parts only—a cylindrical glass body, a glass piston-rod, and the usual needle. No lubricant is required and there is no packing of the piston needing renewal. The glass piston fits well and works easily. The syringe can be easily sterilised; any of the ordinary solutions for this purpose may be employed, or it can be stoved up to a heat of 125° C. The syringes are made in five sizes—namely, 20, 40, 80, 150, and 300 minims, the prices ranging from 9*s.* 6*d.* to 17*s.* 6*d.* The smaller syringes are for hypodermic injections of morphia, ergot, cocaine, &c., and the larger ones for serum injections. Each syringe, with two steel needles and mounts, is packed in a nickel-plated case three inches long by one and one-eighth inches wide. Needles of platinum with iridium points can be supplied if required. It is stated that the syringe obtained the "Prix Barbier" in 1898.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Nov. 2nd instead of on Nov. 9th, in consequence of the departure of the President for the seat of war in South Africa.

The President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., was in the chair.

Mr. H. MORRIS moved, and Mr. A. WILLETT seconded, a proposition to the effect that registered candidates might be admissible to the Fellowship Examinations without being required to pass the examinations of the Conjoint Examining Board.—The proposition was carried.

The following report from the Committee of Management was approved and adopted:—

1. The Committee of Management have considered the letter from the Registrar of the General Medical Council dated June 19th last, which was referred to them for consideration and report, calling attention to the following regulation of the Council, which is to come into force on Jan. 1st, 1900, viz.:—

"No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced his medical studies at a university or school of medicine or at a scientific institution recognised by one of the licensing bodies and approved by the Council."

The committee now recommend that the following resolution be adopted by the two Royal Colleges and forwarded to the Registrar of the General Medical Council, viz.:—

"The Royal College of Physicians of London and the Royal College of Surgeons of England fail to recognise any authority under the Medical Acts in virtue of which the General Medical Council may impose the conditions formulated in the regulation in regard to the registration of medical students, referred to in the letter from the Registrar.

"They decline to recognise the requirement that scientific institutions where medical study is commenced should be approved by the General Medical Council."

2. The committee recommend that the Rochdale Municipal Technical School, which has been visited on behalf of the committee, be added to the list of institutions recognised by the Board as a place of instruction in chemistry, physics, and practical chemistry.

3. Dr. Edward Liveing and Mr. T. Pickering Pick retire by rotation from the committee and are eligible for re-election.

Mr. Pickering Pick was re-elected a member of the Committee of Management.

A report from the Laboratories Committee was received and adopted.

1. *The work on diphtheria for the Metropolitan Asylums Board (Bacteriological Department).*—Since the 9th of June last 700 doses of antitoxin, each containing 2000 units, and 9900 doses, each containing 4000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, have been supplied and all the demands fully met. During this period 41,000,000 units have been supplied.

2. *The testing of antitoxin.*—During the quarter Messrs. Parke Davis and Company have had 500 cubic centimetres of diphtheria antitoxin tested in the laboratories. It was certified as containing 450 units per cubic centimetre, as sterile, and as being free from excess of antiseptic.

3. *The grant from the Goldsmiths' Company.*—Under this grant 705 doses of antitoxin, containing 1,670,000 units, have been supplied to the general and children's hospitals in or near London.

Sir William Mac Cormac, who retired in rotation from the Laboratories Committee, was re-elected a member.

Mr. Morton Smale was re-elected a member of the Board of Examiners in Dental Surgery.

The PRESIDENT reported the acceptance by himself and Mr. Treves of appointments as consulting surgeons to the British forces in South Africa, and the following motion was carried:—

That the Council hereby express their cordial approval of the action of Sir William Mac Cormac and Mr. Treves in accepting service under the Government in the war now in progress in South Africa and their appreciation of the opportunity thus afforded to the College of being represented by its President and Mr. Treves in the performance of a national duty.

Mr. Thomas Bryant was re-nominated as the representative of the College on the Council of University College, Bristol.

The PRESIDENT reported that the Benchers of Lincoln's Inn had kindly granted to the College the use of their hall for the dinner to be given in connexion with the centenary of the College, and that the library of the Inn would also be available for receiving the guests before the dinner.

The PRESIDENT stated that the vacancies on the Court of Examiners occasioned by the expiration of the periods of office of Mr. Edmund Owen, Mr. William Anderson, and Mr. Herbert W. Page would be filled up at the ordinary meeting of the Council in December. Mr. Owen does not intend to offer himself for re-appointment.

The Council proceeded to discuss the desirability of instituting a gown for the Members of the College and finally resolved that the Members should be authorised to wear a gown, and it was referred to a committee to consider and report as to the form of gown to be worn.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 11, 1899.

THE general body of the profession is awakening to a perception of the fact that it has duties to itself as well as to the public—duties which it cannot devolve either on the medical authorities or on the General Medical Council. There are indications of this new sense of responsibility in almost every county and in every division of the kingdom. It is not only in the United Kingdom that medical men are beginning to take united action, but in the colonies, and even on the continent. Various causes have contributed to this revival of attention to the interests of the general body of practitioners which constitutes the great defence of the public against disease and mortality. Hospitals and dispensaries are very well in their way, and in some cases they are an unspeakable blessing to certain classes of the community, but the local medical man is the source to which by night and day the public look for help in emergency and in the common diseases of life. Unfortunately there is no corresponding sense of obligation on the part of the public. It almost seems as if there were a deep apathy in the public mind as to whether the profession fared ill or well. Medical men are themselves very much to blame for this state of matters. They have not asserted themselves. They have submitted to be used and exploited by great societies and organications as if they had no value. They have been at everyone's beck and call often without recompense or even thanks. The unreasonable growth of the hospital system, especially in its out-patient department, has been highly injurious to them without being in any corresponding degree beneficial to the classes for which it caters with pauperising carelessness. These evils have been borne with wonderful patience till they have become unbearable and in vindication of its self-respect the profession is everywhere rising to claim to be treated as a profession, the education for which is more prolonged and costly and the practice of which is more arduous than any other.

If any reader thinks that we exaggerate in our description of the grievances of the profession let him study the reports which appear on the subject from time to time in the medical journals, and especially those which we publish from our Special Commissioner on the Organisation of the Profession. He will then be convinced both of the grievances and of the reality of a rising tide of desire in the profession to have them remedied. We venture to say that there has been no previous exposition of these grievances so particular in details, so suggestive of remedies, and so informing as to the general question of medical attendance on the industrial classes of the community. It is scarcely likely that the profession will lapse into carelessness again on this subject or that it will any longer neglect its own duties to itself. It may rest assured that the medical authorities and the General Medical Council will be more likely to regard such grievances and to help in the removal of them if registered practitioners show due diligence in asserting their own rights. But organisation in a profession like ours is a matter of no little difficulty. The essentially private nature of medical practice, the extreme variety of social conditions in different districts, the absorbing duties of medical life, and the overcrowded state of the profession making competition more or less inevitable, all tend to make organisation difficult. Our Special Commissioner shows that in one place every practitioner has a club; that in another the local association proposes to prohibit any member having a private club without the consent of the association; that among the miners of Durham a rise from 6*d*. to 9*d*. a fortnight for attending the whole family will satisfy practitioners; that in another 4*s*. 4*d*. per member per year is demanded; and that in yet another—namely, Ashton—it is actually proposed to abandon uniform rates of contribution and to charge in individual cases 1*s*. for a visit and two or three times more for medicines. A letter which we publish to-day from a practitioner who holds clubs which yield him £200 a year shows that he does not believe in the Ashton tariff and is well satisfied with the old system if the rate is 4*s*. 4*d*. per head, and women and children are not included. In one or two of the larger provincial towns a few practitioners are working provident dispensaries on terms and principles which seem to their fellow practitioners to be unsatisfactory. Such varieties of view are not to be harmonised immediately or absolutely. The great desiderata are full and good-tempered discussion of different plans and a steady determination on all sides to arrive at some general principles. Local organisations for the discussion of local circumstances are invaluable and indispensable, but general principles must be worked out in some central body.

It is, in our opinion, a pity that there should be any doubt as to the fitness and willingness of the British Medical Association to be a central body in this sense and for this purpose. Of course, by its very size and bulk it is unfitted for the working out of general principles for united action in every place; but it should have no difficulty in electing a strong committee or a council representative of all districts for this purpose. And if it fails in doing so it will fail in one of its prime functions. Such a failure at this moment would be a misfortune to the profession and would throw back indefinitely the prospect of that united front and strong organisation which are needed. No number of local organisations will suffice without some strong inclusive and central body to harmonise the whole. Local organisations will best serve the cause of unity and organisation, first, by the fullest elucidation of local circumstances and by doing the best that is possible in their own territorial sphere, and, secondly, by giving every help in the construction of a central committee and in showing all due respect to its decisions. Only so will the effective organisation of the profession be achieved.

Two subjects of considerable importance in relation to cardiac pathology have recently been prominently drawn attention to. Dr. SANSOM in delivering the Hunterian Lecture chose as his theme "The Effects of Influenza upon the Heart

and Circulation." His method of considering the problem was throughout an admirable one. He drew conclusions not only from his wide clinical experience but also from a large number of pathological observations. It is generally acknowledged that in influenza the nervous system suffers the most frequently and the lecturer, whilst dwelling at some length on the clinical evidence of the reactions of the infective agency of influenza in certain morbid states, such as rheumatism and gout, confined his remarks mainly to cases in which the functions of the circulatory mechanism had been impaired in close or in remote, but still causal, relation with influenza. The chief disturbances noticed were the rapid heart, cardiac dilatation, the irregular heart, the slow heart, and pain at the heart, all following or dependent upon the influenzal infection. In relation with the rapid heart other phenomena are observed, such as those associated with Graves's disease and flatulent dyspepsia, associated in some cases with dyspnœa and a sense of failing heart. These attacks Dr. SANSOM aptly terms "vagus storms"; they seem to involve all the tracts supplied by the pneumo-gastric nerve, but in some cases one area disproportionately to the others. The cardiac dilatation the lecturer thought was generally only temporary and likewise due to an affection of the nervous mechanism, as was also the irregular action of the heart. Particularly interesting were the remarks on cardiac pain after influenza. Dr. SANSOM stated that he had had a series of "cases offering both from the clinical side and from that of morbid anatomy evidence of aortitis, extensive or limited, acute, subacute, or chronic." We believe this to be a new observation and one of considerable importance. On reference to the report of the lecture[1] a full account of the changes found in the aorta will be found. The existence of aortitis renders the prognosis more grave, but if the morbid changes are limited in locality there may be a return to good average health. The Hunterian Society may be congratulated on having received an instructive address.

In the Bradshaw Lecture Dr. ARTHUR FOXWELL discussed a subject which he aptly considered to be one of the *opprobia medicinæ*. The differences of opinion which have existed and do exist as to the causation of the so-called inorganic murmurs are legion, and yet these murmurs are amongst the most frequent of physical signs. Dr. G. W. BALFOUR suggested that they are due to mitral regurgitation, whilst Dr. SANSOM modifies this view by conjecturing that they owe their origin to want of apposition of the mitral flaps on account of an enfeeblement of the muscular apparatus of the left ventricle. Dr. HANDFORD'S view is that the pressure of a dilated auricle on the pulmonary artery may cause the murmur; whilst Professor CLIFFORD ALLBUTT leans to the belief that the solution will be found in some altered relation between the blood and the walls of the vessels, especially the pulmonary artery and conus arteriosus, so that an excessive vibration of the walls takes place. Dr. FOXWELL, in his able address, stated his reasons for not accepting these views. In support of his contention that it cannot be due to the quality of the blood he showed by illustrative cases that in many patients where this is greatly changed there is no murmur; that, in addition to being absent when the blood is much deteriorated, the murmur frequently exists when there is no change in the blood. He further maintained that if it were due to changes in the blood, then similar murmurs should arise in all parts of the body to a greater or less extent, especially where there are angles or sharp curves, and not be confined to a definite locality. Some more arguments were adduced, but not as striking as those which we have quoted. Perhaps the most convincing proofs that this theory — namely, of altered relationship between the blood and walls of the vessel as the cause of the hæmic bruit—could not be sustained are to be found in experiments carried out by Dr. FOXWELL in which various fluids were forced through a heart with a view to determine whether changes in the circulating medium made any differences in the sounds produced. These experiments were made with an ingenious apparatus which was fully described, and they demonstrated that such changes produced no alteration in the sounds. The lecturer then went on to say that if the murmur be not due to a change in the contained fluid it must arise from some defect in the containing apparatus. As its area of audition is localised it would seem that the defect must also be localised—that is, it must occur in the heart or in some one or more of the great vessels close to the heart. Answers were then given in the negative as to whether the functional murmur could be due to valve lesions occurring in the various orifices.

Having taken all pains in disposing of the theories hitherto adduced to explain the causation of these murmurs Dr. FOXWELL proceeded to expound his own. We may give his suggestion in his own words: "There is one post-mortem abnormality which is constantly found in patients who have died with this functional pulmonary murmur—that is, dilatation of the conus and pulmonary artery with a carrying up of the root of the artery, so that in the supine condition it tends to lie directly over its bifurcation. Is this the cause of the murmur? I believe it is." A full understanding of this theory is more easily attained by a reference to diagrams, for which we refer our readers to the report of the lectures in THE LANCET of Nov. 4th. Dr. FOXWELL'S arguments and experiments in support of his theory are sound and, to our mind, more convincing than any of those adduced in favour of hypotheses brought forward by other observers. They are, however, too long and elaborate for us to attempt to summarise here. He leaves no part of the subject untouched. He gives cogent support for his statement that a dilatation of the conus and pulmonary artery does take place and that a murmur is produced thereby in the second and third left interspaces. He reasons both on physiological and pathological grounds and his conclusions are difficult to refute. No doubt his experiments will be repeated by others, but until some fallacy has been proved to exist in his method of work and in his deductions we are certainly disposed to accept his explanation of the causation of functional heart-murmurs.

A GOOD deal of correspondence has been going on in the public press on the subject of vaccination officers and their duties, and it is alleged that since the passing of the

[1] THE LANCET, Oct. 21st, 1899, p. 1075.

Vaccination Act, 1898, the Local Government Board have by a legal *tour de force* deprived the guardians of their former powers in relation to vaccination officers and that the present position is one which is altogether opposed to the principle of self-government. We have no object in defending or in refuting the allegations in question, nor have we any reason for supporting the President of the Local Government Board, who through one of his secretaries has joined in the correspondence and who maintains that the attitude which has been taken up by the various correspondents is due to misapprehension and that his action is quite consistent with his statements in the House of Commons when the Vaccination Act of 1898 was under discussion. Mr. CHAPLIN is quite capable of defending his own attitude.

But we feel convinced that there still is a considerable amount of misunderstanding on the subject and we therefore think that it may be useful to recall some of the principal facts bearing upon the question. When the Vaccination Act, 1871, was passed it was made obligatory on the part of all boards of guardians to "appoint and pay one or more ..... officers ..... to prosecute persons charged with offences against that Act [the Vaccination Act of 1867] or otherwise to enforce its provisions." Such a statutory obligation seems as clear as the words are simple. But it is evident that before long the Local Government Board did not wish vaccination officers to be supreme and independent in this matter of prosecuting and of enforcing compliance with the law of vaccination; and hence under another statutory provision they issued an Order dated Oct. 31st, 1874, in which Article 16 limited the power of the vaccination officer in the conduct of prosecutions and legal proceedings "until he shall have brought the circumstances of the case under the notice of the guardians and received their special directions thereon." This might have been harmless—if not, indeed, advantageous—provided the guardians, as vaccination authorities, had been loyal, but one and another board, after getting themselves elected as the authority for the administration of the law as to vaccination, deliberately set themselves in their official capacities to prevent the carrying out of the law by opposing and thwarting the vaccination officers under Article 16 referred to. The same article required the guardians, amongst other things, to "give directions authorising the vaccination officer to institute and conduct ..... proceedings," and thus the Local Government Board made it appear that the statutory provision of 1871 was insufficient for the action of the vaccination officer unless it was supplemented by a direction of the guardians. This gave the guardians their opportunity, with the result that when the Royal Commission on Vaccination reported they announced that 122 out of 620 boards of guardians failed to enforce the law. That number of defaulting vaccination authorities, we may add, subsequently underwent material increase.

But, in the meantime, it would seem from the correspondence which has taken place that circumstances arose which made it necessary for the Local Government Board to ascertain whether their own Order was in accordance with the law or not; and it would appear not only that they were advised that the vaccination officer possessed the power of instituting proceedings irrespectively of special instructions, but that this opinion was supported by the law courts. Indeed, from the first there were those who held that if by statute guardians, as vaccination authorities, were compelled to appoint an officer to "enforce" the provisions of the law as to vaccination it could not be legal to give those same guardians a power by which they were enabled to prevent the vaccination officer from performing the very duty which was assigned to him by statute. Indeed, it seems highly probable that Article 16 of the Order of 1874 was, in its most important respect, *ultra vires*. Then came the Act of 1898, and when the Local Government Board issued their new regulations under it they did not, as alleged, by a legal *tour de force* give the vaccination officer any new right to prosecute. They simply left out of the new instructions anything which resembled the limitation which they had wrongly, as it would appear, imposed upon that officer in the Order of 1874, and they have now left his statutory obligation to enforce the provisions of the law unfettered without any intimation that either they or the boards of guardians have any power to restrict it. The attitude is, we believe, strictly correct, and the former attitude in the Order of 1874 was probably altogether incorrect. Hence the mistake has not been repeated. This is evidently the meaning of Mr. LITHIBY'S letter in the *Times* of Oct. 30th, in which he states, on behalf of the President of the Local Government Board, that "the new Order of 1898 does not instruct the vaccination officer to take proceedings against defaulters without the direction of the guardians. That duty is imposed on him directly by a superior authority,—viz., by Parliament itself."

In one respect the present position is to be regretted. In many unions an unwilling body remains the vaccination authority. It was this same unwillingness which in times past rendered the provision of the Act of 1871 necessary, and hence it is that under the present law the guardians must appoint and pay an officer to do that which they dislike and that they are powerless to prevent his performing his duty. All this goes to show, as we originally pointed out, that it was a mistake to retain a Poor-law authority as the vaccination authority. The body to enforce the law as to vaccination ought to have been a body having public health functions and as such a body having an interest in preventing the spread of infectious diseases. Under the present system the Poor-law authority has the function of administering vaccination as a preventive against small-pox and sanitary authorities are compelled to pay for the control of small-pox, the spread of which is the result of neglect on the part of the vaccination authority or of their officers. Such a position of affairs ought not to exist and it is to be hoped that it will come to an end when the Vaccination Act, 1898, has run the life of five years which Parliament has conferred upon it.

As a permanent memorial of the Queen's Diamond Jubilee the Widnes Diamond Jubilee Committee have formally handed over to the town council, for the use of the inhabitants in perpetuity, the Victoria Park and Recreation Ground and Victoria Promenade. The funds for these improvements (£13,000) have been provided by the residents in the town.

Annotations.

"Ne quid nimis."

THE CENTRAL BRITISH RED CROSS COMMITTEE: ITS WORK AND ITS WANTS.

THE applications for employment under the Red Cross from medical men and laymen and the offers of contribution of ambulance material have been so varied and numerous that the Central British Red Cross Committee and the associations represented on it desire earnestly that it should be known that for the present ample provision has been made in the direction of supplementary aid to the army medical services in the field. It is now hoped that the public will confine themselves to contributions to the fund which is being maintained by the National Aid Society (British Red Cross Society), whose offices are at 5, York-buildings, Adelphi, London, W.C. The following facts will enable the public to judge how much has been organised by the committee up to now:—

1. Colonel J. S. Young has proceeded as Red Cross Commissioner to South Africa amply provided with funds and material to act, as may appear best on the spot, in coöperation with the Principal Medical Officer of the Field Force, with a view to aiding the sick and wounded not only of our own troops but also those of the South African Republic and Orange Free State.

2. Equipment for fitting up a hospital train has been sent out to Durban, similar equipment is about to follow, and a complete hospital train of seven carriages, with kitchen and all necessary accessories, is being constructed.

3. A hospital ship is being fitted out and equipped at the expense of the Princess of Wales's Branch of the National Aid Society, and will probably be ready to sail for South Africa about the middle of the month, in order to act as a relief to the hospitals at the base.

4. Ample provision has been made by the Army Nursing Reserve to supply additional highly-trained nursing sisters to the various military hospitals. 40 have already taken over duties and there remain 100 still on the list for employment as occasion arises.

5. The St. John Ambulance Brigade is prepared to meet any requirements that may arise in connexion with the supply of ambulance officers and hospital orderlies, and several members of the brigade are now under orders to hold themselves in readiness.

These are the main outlines of the work which has been organised, and it may be added that each section has involved the consideration and execution of numerous details, which would now only be put into confusion were further offers of personal assistance or material accepted. Those who have already arranged to contribute material should forward the articles by Tuesday next, Nov. 14th, to Messrs. Barnes and Co., Limited, Battle Bridge-lane, Tooley-street, London, S.E., each case being labeled "British Red Cross," and the nature of the contents being clearly indicated.

TO MEET THE DIRECT REPRESENTATIVES.

A CONFERENCE has been arranged to be held in the Examination Hall of the University of Durham College of Medicine, Newcastle-on-Tyne, at 6 P.M. on Wednesday evening, Nov. 22nd, 1899, for the purpose of discussing medical politics generally and of hearing short addresses from Mr. George Brown, Mr. Victor Horsley, and Dr. J. G. Glover, the Direct Representatives for England and Wales upon the General Medical Council. The conference has been called by the following local societies: the North of England Branch of the British Medical Association, the Newcastle Medico-Ethical Society, the Gateshead Medical Association, the County of Durham Medical Union, and the South Shields and Jarrow and the Sunderland branches of that Union. Co-operation is also looked for from the Middlesbrough and District Medical Society. But the meeting will not be of local importance only, as is shown by the agenda. The Address by Mr. Brown will deal with the work of the General Medical Council as regards Medical Reform from the institution of Direct Representation to the present time. Mr. Brown will also speak of the use of medical titles, with particular reference to the Hunter case. The address by Mr. Horsley will treat of the constitution of the General Medical Council and the procedure of the Council, especially in relation to its legal business. Dr. Glover will expound the general work of the General Medical Council and explain the scope and constitution of the Conciliation Board and his views upon contract medical work. After discussion of these and kindred topics a resolution will be submitted to the conference by Mr. Clark Newton, President of the Newcastle-on-Tyne Medico-Ethical Society, and seconded by Dr. A. W. Blacklock, President of the Gateshead Medical Association, urging strenuous opposition to the certification by registered practitioners of unqualified persons as competent to undertake any branch of medical practice.

NINE FISHES (!) AT A BIRTH.

OUR correspondent at Rome has forwarded us another of those fabulous stories of which, as he justly remarks, Italy is so often the birthplace. It is gravely reported that at Casteldaccia, near Palermo, a woman after a laborious confinement was delivered of nine little animals in the form of fishes, four of which weighed 15 grammes a-piece and five 10 grammes a-piece. The "mother," who had been *enceinte* about four months, our readers will be glad to learn, is going on rather better than might have been expected. Poor woman! no doubt she feels easier now that she has got rid of her extraordinary burden of nine fishes. When we consider the superstitious nature and the extreme ignorance of the peasantry in both Italy and Sicily—in the latter island so late as 1881 some 60 per cent. of the inhabitants over 12 years of age were unable to read or write—it is little to be wondered at that such tales should find a ready origin and an equally ready credence. We can well imagine the stir that would be caused amongst the community by such an extraordinary occurrence and the many ingenious theories that would be adduced as to the possible cause. The preference would most probably be given to some form of maternal impression or to a miraculous impregnation with, let us say, sea-water. We fancy, however, that if the mother be a Sicilian peasant woman her habits would be such as to save the gossips the trouble of trying to fit in the date of impregnation with her last sea-bath. Her husband should have been a mariner, as in the case recorded by Lycosthenes, when the wife of a mariner was delivered by a midwife of a shapeless mass followed by an animal with a long neck, blazing eyes, and clawed feet. If we are to accept the nine fish-like animals as separate fœtuses the case is one more example of that prolificity with which Italy has furnished us so many instances. At Naples in 1839 Giuseppa Califani, so Dr. Gould tells us in his "Curiosities and Anomalies of Medicine," gave birth to five children, while a case of sextuplets was recorded in Italy in 1844. If we turn to the older and less credible writers we find that Sigebert in his chronicles says that the mother of one of the kings of Lombardy bore seven children at a birth. Franciscus Picus Mirandulæ says that one Dorothea, an Italian, bore 20 children at two confinements, the first time bearing nine and the second time 11. Paré gives a quaint picture of this marvellous person in which her abdomen is represented as hanging down to her knees and supported by a girdle from her neck. At the auction of the San Donato

collection of pictures a portrait of Dionora Frescobaldi by one of the Bronzinos in the sixteenth century was sold for about £600. At the bottom of this portrait was an inscription stating that she was the mother of 52 children. This remarkable woman never gave birth to less than three at a time and tradition credits her with as many as six. But we have said enough to show that Italy in the past has had a reputation for obstetrical anomalies which, if the latest story is to be believed, it is in no danger of losing. But even Italy will find it hard to rival the well-known and marvellous story of the Countess Margaret, spouse of Count Hermann of Henneberg, who at the age of 42 years brought forth 365 infants at one birth, of whom 182 were males, 182 females, and the odd one an hermaphrodite. They were all christened, the males by the name of John and the females by the name of Elizabeth, in two large brazen dishes, by the Bishop of Treves. During the last century the dishes were still on exhibition in the village church of Losdun, near the Hague, and were considered one of the curiosities of Holland. We fear that at the present day Countess Margaret's reputation would have been rudely dispelled by the recognition of her 365 infants as merely the vesicles of of a hydatidiform mole, and in the same way, we fear, that "our lady of the fishes" has had but an ordinary abortion with the passage of some blood-clots whose curious shape struck the ignorant credulity of the bystanders. With considerable restraint we refrain from giving the leading case of Mrs. Tofts.

HOUSING OF THE POOR IN ANCOATS.

OUR Manchester correspondent writes: "The housing of the poor is a question of interest not only to the political economist and philanthropist, but one that touches closely the life and work of the general practitioner in our large towns. Anything that degrades the poor works to his disadvantage, while their social and moral elevation benefits both. We may therefore join in congratulating the corporation of Manchester on the completion of their last effort in this direction. On Oct. 23rd the Lord Mayor opened a large lodging-house in Ancoats recently erected by the corporation for the accommodation of single men, which is the outcome of the labours of the Sanitary and the Unhealthy Dwellings Committees. It is three storeys high and occupies a superficial area of 3375 yards with a frontage of 178 feet and a depth of 118½ feet. There are baths, washhouse, and other conveniences in the basement with an administrative block in the front of the building separate from the lodgers' department. It has a smoke room 60 feet by 21 feet, a dining room 55 feet 9 inches by 39 feet, and also a reading-room 50 feet by 28 feet 4 inches. The dormitories contain cubicles divided by varnished wood partitions six inches clear of the floor and 18 inches from the ceiling, the space above the partitions being filled in with open wire lattice-work, and each cubicle has a window opening directly to the outer air. Accommodation is provided for 363 men, who may consider themselves fortunate—i.e., the respectable single men—in having such a refuge from the common lodging-house. Alderman Walton Smith read extracts from a report showing the condition of these places, where, he said, 'there were plenty of decent people who would be glad to pay their 6*d.* a night for accommodation such as they provided.' The cost of the building has been about £21,000. He gave also some interesting facts as to the work of the Sanitary Committee. 788 insanitary houses have been taken down, displacing 2635 persons in the neighbourhood of Ancoats, and the municipal buildings in Oldham-street, Pollard-street, &c., with the lodging-house now opened, provide accommodation for about 25 more than that number. He suggested the formation of a company, as had been done in London in connexion with the Rowton Houses, and as they are said to pay 5 per cent. it seems strange that no such company has been already formed in Manchester by those who love philanthropy, especially when it returns a moderate dividend; for without question that is the wisest kind of philanthropy which, while giving help, does not pauperise but encourages self-help. In all, it appears that the corporation have expended £322,000 in their efforts to solve the great problem of housing the poor, and the Lord Mayor stated that 'the Sanitary Committee spent over the whole range of their work something like £45,000 a year and he did not think that that expenditure could be criticised in any way.' There is no doubt that directly and indirectly Manchester will obtain a good return for these efforts to get rid of overcrowding, dirt, and disease, and to give the poor of the city some chance of living more human lives. It may be said that the corporation have been compelled to undertake all this building because private enterprise failed to do it."

THE NATURE AND PROPERTIES OF EPINEPHRIN.

THE importance of the internal secretion of various organs was first brought prominently to the notice of physiologists when Claude Bernard demonstrated the existence of a glycogenic as well as a bile-producing function in the liver, proving that apart from the obvious secretion of a gland other and more recondite changes might be effected in the blood traversing its capillaries. It was an easy step from this to the assumption that the function of the mysterious ductless glands might be to generate some substance which, instead of being eliminated from the body altogether or retained for further use, might re-enter the blood and exert a special influence on the nervous system or some other part of the economy. Experiments made upon the thymus and thyroid bodies and upon the adrenals soon showed that extracts of these ductless glands when injected into the veins exerted a well-marked influence on the body and in the last-named instance on the pressure of the blood in the vascular system. The experiments of Oliver and Schäfer recently recorded in the *Journal of Physiology*, which have been corroborated by other observers, showed that intravenous injection of the extract of the adrenals, and especially of the medullary portion, caused rapid and persistent increase in the pressure of blood in the arterial system. The subject has been taken up again by Mr. John Abel of the Pharmacological Institute of the Johns Hopkins University at Baltimore, and he has contributed an important article upon it to the *Zeitschrift für Physiologische Chemie*. He was induced to pursue the investigation from the conviction that his results would probably throw some light on the nature and semeiology of Addison's disease, an affection that presents various features that are suggestive of auto-intoxication. On examining the extract of the adrenals he found that by the employment of benzoyl chloride and a 10 per cent. solution of soda he was able to extract a peculiar substance which is present in the proportion of about one part in 10,000 parts of the gland substance, to which he has given the name of epinephrin from Professor Hyrtl's term "epinephris" applied to the adrenals. It is a base which has a bitterish taste and produces slight local anæsthesia. Its formula is $C_{17}H_{15}NO_4$. It is precipitated from its acid solutions by picric acid. The ordinary extract serves, no doubt, well enough to show the well-marked effect on the blood-pressure, but it is obvious that from a pharmacological point of view the employment of the specific agent when isolated, or of its salts, is far more satisfactory, enabling more exact and reliable conclusions to be drawn than when mingled with other substances. Mr. Abel finds that when solutions of the salts of epinephrin are applied to the normal conjunctiva, or to one that by stimulation is more or less congested, the vessels

immediately contract and the contraction persists for a long time and that the same holds good for other mucous membranes. It is right to observe, however, that these effects only follow the application of the salts of epinephrin, and the base itself has very slight, if any, physiological properties. The salts of epinephrin when injected into the veins cause great and persistent increase of blood-pressure. They first excite and then paralyse the respiratory centres. At a later period and given in larger doses the heart is paralysed. Good evidence has now been obtained that the blood returning from the adrenals also contains the substance that raises the blood-pressure and that this is not present in the blood of any other part of the body. Its formation appears to be under the influence of the splanchnic nerves, which may thus be regarded as containing secretory as well as vaso-dilator fibres. Electric stimulation of the splanchnic nerves occasions an increase in the production of epinephrin. If we pass now to the consideration of the relations of epinephrin to Addison's disease it may be remarked that a dark pigment—epinephrinic acid—is produced when epinephrin is treated with dilute alkalies, and Mühlmann has found that the pigment of the bronze-coloured skin consists of oxidised pyrocatechin or epinephrinic acid. Now pyrocatechin is normally produced by the adrenals, enters the blood in small quantities, and is excreted by the urine possibly as uro-erythrin, staining urinary sediments of a rose colour. If, however, at any time an accumulation of pyrocatechin should occur in the blood the conditions of Addison's disease are established. The pyrocatechin in that case not only bronzes the skin, but is the cause of all those toxic phenomena which characterise that affection. It is interesting to notice that under the action of strong alkalies the skatol and pyrrhol bases are produced.

THE SYSTEM OF SUBSIDIES TO CHARITIES IN NEW YORK.

THE Charity Organisation Society of New York recently sought to ascertain the practice of other large cities in the United States in regard to the giving of subsidies to charities. The result was to bring out the exceptional position which New York occupies among all American cities in making large grants to private charities and the equally striking unanimity of expert opinion against such grants. Of the 29 large cities other than New York included in the examination, 12, or nearly half, make no grant whatever from public resources to private institutions. It was found that, though there are exceptions, the general principle governing this matter in the cities and towns of the United States is that public money is given only to public agencies. Apart from New York, the most notable exceptions are Washington, where the plan of appropriations from the United States Treasury is strenuously opposed by the Superintendent of Charities, Baltimore, where payment is made to private hospitals and institutions for children upon a per capita basis, and Richmond, where lump appropriations are made as in New York to a great variety of agencies. In Chicago there are no appropriations corresponding to those made to charitable institutions in New York. In Boston there are no appropriations whatever to charities under private control. The same is true of Cincinnati, Cleveland, and Pittsburg, with other smaller cities. A large majority of the 20 or more persons with whom the society corresponded, and who may be regarded as authorities on the subject, emphatically opposed the policy of appropriating funds from the public treasury to private agencies. They took the position that homes for defective children, societies for the prevention of cruelty to children, children's aid societies, newsboys' homes and lodging-houses, orphan asylums, homes for the aged, general hospitals, special hospitals, dispensaries, homes for fallen women, general relief societies, special societies of various kinds having relief funds, bureaus of charities, and charity organisation societies, should all be private charities sustained entirely by voluntary contributions.

SIR WILLIAM MACCORMAC AND THE MEDICAL PROFESSION IN SOUTH AFRICA.

THE patriotic conduct of Sir William Mac Cormac in offering his services to the Government at the seat of war in South Africa has suggested to a correspondent (Mr. J. F. Briscoe of Westbrooke House, Alton) that in addition to his military services Sir William Mac Cormac may do the profession of medicine in South Africa service by setting on foot a re-organisation of the present position of scientific education in the British colonies at the Cape. Mr. Briscoe says that "the petty jealousies and rivalries leading to a continuous succession of internal disruptions have hitherto materially affected the best interests of the profession in South Africa." Therefore he hopes that the principal towns, such as Capetown, East London, Port Elizabeth, Durban, and Maritzburg, will offer the President of the Royal College of Surgeons of England such a reception as "may be the means of a revolution in the medical and surgical world of the States of South Africa." Mr. Briscoe is certainly optimistic, but in the present state of political tension it will, we fear, be a long time before we can say, *Cedunt arma togæ*, for the cloud of war at present overshadows everything else.

NURSING IN VIENNA HOSPITALS.

AN article in the October number of the *Nineteenth Century* gives a vivid description of the Allgemeines Krankenhaus, the largest hospital in Vienna, as it appears to the eyes of a lady. To those of our readers who have not had the opportunity of studying in Vienna Miss O'Connor-Eccles's observations will be as shocking a surprise as they were to herself. The total want of regard for patients' feelings, the low class of women employed as nurses, and the dependence of nursing upon the patient's readiness to tip his nurse, are, as the writer points out, conditions of which any hospital in England would have been ashamed for the last 50 years. The Allgemeines Krankenhaus, the only large general hospital in Vienna, is nominally intended for the benefit of the poor, and the class of patients admitted is the same as that from which most of the patients in our own general hospitals are drawn. Yet, as the writer in the *Nineteenth Century* remarks, "every hospital patient in Vienna is a paying patient." He is supplied gratis with one meal a day. For other food he depends upon the goodwill of his nurse, and her goodwill depends upon his pocket. Any attempt at comfort or agreeable decoration of the wards with flowers, pictures, &c., such as make a London hospital patient's life a little less gloomy, is as conspicuously absent from the Allgemeines Krankenhaus as is the slightest attempt to conceal from one patient the operation that is being performed upon another, though it is very likely to be performed on the spectator himself on the following day. Miss O'Connor-Eccles seeks some consolation for the miseries of the patients in a Vienna hospital in the reflection that on the scientific side of medicine Vienna is as much in advance of us as we are superior to Vienna in everything else concerning the welfare and comfort of hospital patients. Her remarks, however, seem to show that as regards the science of medicine her judgment is not so well informed as it is when weighing the general conditions of hospital life. The scientific instruments which were seen at the Allgemeines Krankenhaus appear to have

made a great impression. "They are," the writer says, "of great perfection. One instrument is employed for registering the force of the blood-current through the arteries. There is also a machine of the most delicate description for slicing specimens for microscopical examination." Miss O'Connor-Eccles does not seem to realise that in every medical school in London she could find an arterial manometer and a rocking microtome, although their presence is not regarded as an excuse for rough treatment of patients in the adjoining hospital. The article, however, is one which may be read with much pleasure for the writer's intelligent observation and accurate description, and Miss O'Connor-Eccles's suggestions for reform are worthy of the attention of our readers and may open a new field for the energy of benevolent English ladies.

THE LOW BIRTH-RATE OF ISLINGTON.

THE annual report of the medical officer of health of Islington is full of interesting information. The parish is very numerous, containing in the year 1898 a population of 345,000 persons. The density of the population, notwithstanding some good open spaces, is great, being 111·0 persons to an acre as compared with 47·9 in Liverpool. The death-rate is remarkably small—16·5 per 1000. In the preceding year it was 15·8—the lowest on record. The marriage rate in the preceding year—18·57 per 1000 inhabitants—was the highest for many years. In spite of all these favourable circumstances the birth-rate was lower than any recorded, being at the rate of 27·39 per 1000 inhabitants. For the years 1861–70 the average annual rate was 37·20. In other places for the year 1898 the birth-rate was much higher. In the 33 great towns it was 30·4 per 1000. In Liverpool it was 35·2. There is much fluctuation in the birth-rate of the parish as is seen when that for each decade is considered. But the record minimum is a matter for the serious consideration of the inhabitants of "merrie Islington." It is surely a fact of some significance that, with a population less by 45,151, Islington in 1890 had almost as many births (9419) as in 1898 (9453).

REMOVAL OF A FOREIGN BODY FROM A BRONCHUS.

THE removal of a foreign body from a bronchus is frequently difficult. In the *New York Medical Journal* of Sept. 30th Dr. A. Coolidge, jun., has described an ingenious method of ascertaining the position of, and removing, the foreign body. Mirrors and angular instruments introduced into the tracheal wound are difficult or impossible to manage. Schroetter has shown how by introducing a straight speculum into the trachea and bending the upper part of the body and head backward and to one side the speculum may be pushed downwards so that its axis is a continuation of the axis of the lower part of the trachea. With proper light not only the trachea but often the whole length of the right and much of the left bronchus can be seen. A man, aged 23 years, had worn a tracheotomy tube for 20 years on account of stenosis of the larynx. The last tube, which was of hard rubber and had been several months in use, became detached from the shield and was inhaled, causing severe coughing and difficult and noisy breathing. Examination with the x rays gave a negative result. The patient was put under ether and placed on his back with the shoulders over the end of the table and the head was held downwards and rotated to the right. The tracheal opening was enlarged downwards. Not having any other straight tube of the proper calibre Dr. Coolidge used a urethroscope half an inch in diameter and three inches long, which was a little short for perfect examination. This was passed through the tracheal wound with the stylet in place and turned downwards; the stylet having been withdrawn, the speculum was without difficulty pushed down the trachea to within about an inch of the bifurcation. A frontal mirror with reflected sunlight illumined the field perfectly. The foreign body was seen in the right bronchus, the upper end being about half an inch below the bifurcation. It was seized with alligator forceps introduced through the speculum and removed without difficulty. During the whole time, except for attempts at coughing which soon subsided, respiration was carried on easily through the speculum.

THE PREVALENCE OF SMALL-POX IN HULL.

MANY people are becoming anxious at the apparent inability of the Town Council of Hull to control the prevalence of small-pox in their borough. The disease has now prevailed there on and off for several months and it has spread to other places, notably to Beverley, during the past ten days. It is now alleged that it is the small-pox hospital itself which, by the aggregation of small-pox patients in near proximity to a susceptible population, is the cause of the maintained prevalence of the disease. This is a point which should receive the careful attention of the corporation.

A COOLIE HOSPITAL IN SUMATRA.

THAT the true spirit of colonisation is largely developed in the people of Holland is shown by their intelligent and humane management of their possessions in the East Indian Archipelago. Five of the principal private companies in North-Eastern Sumatra maintain well-equipped hospitals for the benefit of their coolies and other dependents, while even the smaller associations of planters have established huts where skilled medical and surgical aid can be obtained. The following description of the Bangkatan Hospital, which is the property of the Deli-Maatschappy Company, is from the pen of Dr. L. Martin[1] who for five years has been at the head of the institution. 1. Three wooden pavilions painted white, standing on cemented plinths, double-roofed and thatched with palm leaves, each 60 metres long by six broad, and containing wooden cots for 50 patients. 2. A kitchen covered with sheet iron, including rooms for the cook and his assistants. 3. Latrines situated on the bank of the river, of which the water serves for flushing purposes. 4. A pavilion, 20 metres long by eight broad, surrounded by a verandah which is used as a waiting-room. It contains an operating-room with two metal-topped tables, one of which is reserved exclusively for patients suffering from ulcers of the leg, a study for the medical officer, a consulting-room fitted with a large glazed window and a microscope table, and a store for necessaries and dressing materials. In the verandah double-current irrigators are suspended containing a solution of boric acid for the use of the numerous cases of catarrhal and blennorrhagic conjunctivitis. 5. A small mortuary with zinc-covered table. 6. A building which serves as a dwelling for the coloured staff. 7. A covered shed for the convalescents during the heat of the day. Every patient on admission receives hospital clothing and, if necessary, woollen garments. Cases of diarrhœa, dysentery, and cholera are accommodated in a special pavilion. Every article that was made use of for their conveyance to hospital is disinfected with creolin. It is worthy of note that none of the attendants of this pavilion have ever contracted cholera or diarrhœa. The *personnel* of the hospital comprises one medical officer (European), one assistant apothecary, one chief superintendent (Chinese), one chief superintendent (Javanese), one ward servant (Chinese), one operating-room attendant (Chinese) who is also charged with the duty of taking temperatures, two Sikhs from the Punjab who act as policemen, night watchers,

[1] Archiv für Schiffs- und Tropen-Hygiene.

gong-strikers, lamp-cleaners, and orderlies, one gardener with two assistants (Javanese), one market gardener (Chinese), one washerman (Tamil), and one cook and assistant (Chinese). The pay drawn by these men, in addition to their food, amounts to $130 per annum, or at the present rate of exchange about £13. The cost of a patient per diem is about 2*d*. Drugs, instruments, and appliances are all procured from Germany with the exception of chloroform and gutta-percha which are purchased in England. From 30 to 40 lb. of the hydrochloride of quinine are used annually. In 1891 out of 991 patients 196 died, a mortality equal to 19·8 per cent., but the following year the death-rate was only 9·2 per cent., and since then it has still further decreased. In 1895 the number of cases treated was 1731, the deaths numbering 106, or 6·1 per cent. The prevailing disease is paludal fever.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE fifteenth annual meeting of the Fellows and Members of the Royal College of Surgeons of England will be held on Thursday, Nov. 16th, at 3 P.M. No notices of motions are accepted by the Council, so that the only subjects which can be considered are those which are brought before the meeting by the Council itself, and to these the discussion is generally limited. The annual report of the Council is presented to the meeting, but not for approval or adoption, and the speeches at the meeting have not the slightest effect on its ultimate fate. There are, however, several items in the report which are well worthy of being discussed and chief among them is the action of the Council in declining to stay the application for a new Charter so that they might include within it a scheme for the representation of the Members on the Council. Another matter which will be brought before the meeting is the granting of permission to Members of the College to wear a gown. It is essential if these meetings are to be of any value that Fellows and Members should be present in large numbers. Any falling off in the attendance will lead the Council to think that the interest of the Fellows and Members is waning and it will postpone still further the progress of reform.

THE DESTRUCTION OF REFUSE.

FROM a sanitary point of view the dust destructor is a *sine qua non*. Throughout the country this method, it is satisfactory to be able to state, is rapidly replacing the mere dumping down of refuse on low-lying ground, a practice to which has been traced in some instances the occurrence of infantile diarrhœa. But from the economical point of view, also, the dust destructor is desirable, for the common garbage of our towns possesses distinct value as fuel. It remains, therefore, to deal with the destruction of refuse by fire in the most economical and inoffensive way. This problem during the last ten years has been attacked with commendable vigour by engineers, and with most satisfactory results. Special furnaces have been designed which effect the complete destruction of refuse, which utilise the heat evolved, and even the mineral residue, clinker and flue-dust, have become marketable articles. The heat may be used to generate steam and the power thus derived may be employed for driving fans for forced draughts, for supplying steam jets for grinding mortar and clinker, for pumping water or sewage, and for helping in the generation of electric power. In attempting to grapple with this important question, however, our local authorities are often in need of practical information on the subject and it would be of considerable service if they could have placed before them the experience of other authorities who have adopted this system of the disposal and utilisation of refuse. Not before it was wanted, therefore, this information has just been supplied by the Health Committee of the Crewe Town Council and we congratulate their medical officer, Dr. Meredith Young, on the valuable information on this subject which he has compiled at what must have been considerable expense of time and trouble. The information relates to 40 towns and appears in the form of replies based principally upon statements taken from the *Surveyor* of August 19th, 1898. The report is arranged so that the answers relating to each town occur on different pages which may be placed opposite one page on which are printed the questions which were asked. It is obvious from a study of this useful report that deductions as to cost, maintenance, and application can be easily and correctly made by those authorities who propose to add a dust destructor to their sanitary equipment. We understand that copies of this report may be obtained at the price of one guinea, which appears to us to be a rather high charge. However, a perusal of it should save much time, trouble, and expense, and is calculated to facilitate the work of inspection and report which is generally carried out by experts appointed by the authorities. While on this subject we may add that we have received a joint report on refuse destruction from the mayor (Dr. W. E. St. L. Finny), the surveyor, the medical officer of health, and the electrical engineer of the borough of Kingston-upon-Thames. Dr. Finny gives a very clear statement of the advantages of a destructor, while the engineers record their opinions as to the kind of destructor which is best adapted for the requirements of the borough. As we have said, the time cannot be far distant when the dust destructor will be adopted in all our towns, and the information contained in these reports will contribute not a little towards bringing about this desirable reform.

GENERAL VESICULAR ERUPTION FROM EATING MUSSELS.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 13th M. Rendu related the following remarkable case. A man, aged 45 years, came to hospital for a general eruption which had begun on the previous evening. It was confluent on the face, more discrete on the trunk and limbs, and consisted of groups of vesicles on a bright-red erythematous base. Where the vesicles were close together the skin was swollen and œdematous. The eruption was described as a special form of herpes. The vesicles were in groups; in some parts, as on the face, they were so close together that they touched; in others they were discrete and few. On the trunk the eruption was perfectly symmetrical. There was a sensation of smarting and burning, but there was no shooting neuralgic pain in the irritated regions—an important difference from herpes zoster. The temperature was 100·4° F. The patient, who had always enjoyed good health, had one evening eaten more than a litre (nearly a quart) of raw mussels. He slept rather badly and in the morning felt somewhat ill. In the afternoon he shivered and became feverish and in the night he perspired abundantly. On the following morning when he arose he was suffering from lumbago. Another attack of fever with shivering, sweating, and anorexia occurred. On the fourth day he remained at home and suffered from general pains. On the fifth day he felt some heat and smarting in the skin and the eruption began to appear in the face. At the end of a week it had entirely disappeared. M. Rendu pointed out that toxic symptoms began on the second day and attributed the second rigor to incomplete elimination of the toxic agent. Fever was not rare in urticaria; here it was the first phenomenon of the poisoning and was, so to speak, dissociated from the eruption. It was

important to note that the same cause—the eating of mussels—could in one case produce urticaria and in another case herpes, a fact which showed that in dermatology the ascertaining of the pathogenesis of an eruption was of more importance than the examination of the elementary cutaneous lesion. We may add that the varying eruptions produced by single drugs supply analogies to M. Rendu's contention.

EPSOM COLLEGE.

THE secretary of the Royal Medical Benevolent College, Epsom, is now issuing a circular letter reminding the supporters of the College that the local list of subscribers will go to press shortly, so that any corrections or new names should be forwarded to him immediately. He also calls attention to a fact which we have often pointed out in these columns—viz., that small annual subscriptions are gladly received by the council. If every medical man would subscribe but 5s. a year the receipts from annual subscriptions would rise from the present sum of £3374 to close upon £10,000. A subscription of half-a-guinea from each member of the profession would alone bring in over £18,000 a year. "From these facts," he says, "it is clear that medical men generally do not support the College as they ought to do, bearing in mind that considerably over £6000 is required annually to discharge the obligations of the benevolent side of the institution." We know the medical profession is not a rich one, that most of its members have large calls on their purses, and that many of them have of late found their sources of income seriously curtailed; yet let us urge once again the claims of Epsom College upon them. So much is done by the College and at such moderate expenses of working that it is really an institution which the profession as a whole should support by taxing themselves a few shillings annually.

SLUMS, SLUM LANDLORDS, AND PUBLIC FUNDS.

THE London County Council at their meeting held on Oct. 24th had under consideration the reports of the Housing of the Working Classes Committee, who recommended the clearance of four areas at a cost of about £500,000. The recommendations were after some discussion agreed to. There is no doubt that owners of slum property have neglected their obligations in the most shameful manner. The wretched tenements are let out at infamously high rents and absolutely nothing is done to keep them in decent order. It is only fair, on the other hand, to note that the class of tenant who inhabits these buildings is not easy to house respectably. It is not uncommon for closets to be wilfully stopped up and for lead and copper piping to be torn away and sold. Mr. Beachcroft complained that the £500,000 would go into the pockets of the landlords and that it had much better be distributed among the persons displaced. We are quite in sympathy with Mr. Beachcroft's complaint. To pay a man for having neglected his duties is always an unpleasant thing to have to do, but confiscation is an ugly remedy and at present it is the only alternative. But Mr. Beachcroft's proposed remedy is simply fatuous. The money would be frittered away and the plague spot would remain in our midst. The Rev. Fleming Williams said that there existed a syndicate of capitalists who bought up insanitary properties, increased the rents, and so increased the overcrowding. If the Council voted money to buy up slums they would only create more. It is quite possible that persons of this sort do exist and act as Mr. Williams alleged. It will be remembered that when the Government of India offered a reward for the head with the hood of every cobra brought in, despite the number of heads duly taled and paid for the number of poisonous snakes did not apparently decrease. It was then discovered that the astute Oriental took to breeding cobras and sending their heads in to the Government for reward. The slum-breeder is far more dangerous, but how to stop him, in the present state of the law, is a matter of great difficulty.

THE CARMICHAEL PRIZE ESSAY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE President and Council of the Royal College of Surgeons in Ireland give notice that on the first Thursday in November in the year 1900 they will proceed to adjudge a prize of £120 for the best essay that may be presented to them in accordance with the following instructions prescribed by the will of the late Mr. Richard Carmichael:—

1st. "The state of the medical profession in its different departments of physic, surgery, and pharmacy in Great Britain and Ireland at the time of the writing of these prize essays."

2nd. "The state of the hospitals and schools of medicine, surgery, and pharmacy."

3rd. "The state and mode of examination, or of testing the qualifications of candidates of the different licensing colleges or corporations of medicine, surgery, and pharmacy."

Mr. Carmichael's will directed that the authors under these heads should make suggestions "for the improvement of the profession with the view of rendering it more useful to the public and a more respectable body than it is at present." The authors are enjoined to consider the preliminary and moral education of medical and surgical students, as well as the mode of conducting their professional studies and the mode of testing the qualifications of candidates by the licensing bodies. Each essay is to be distinguished by a device or motto and accompanied by a sealed packet containing the name and address of the author, also distinguished by the same device or motto. The essays are not to exceed 65,000 words in length and to be lodged at the College on or before July 1st, 1900. All quotations shall be by reference merely to the volume and page on which the passage desired to be quoted is to be found.

NITROGEN IN PEACE AND WAR.

IT seems to be a perversion of real progress that human ingenuity should be turned to the best means of destroying human life and to obtaining maximum effects in this direction. It is well, however, to bear in mind that the evolution of the terribly dynamic explosives has owed its rapid progress not so much to the frequency of war as to the fact of their immense utility in completing the work of exploration, in opening up hitherto unapproachable areas as in the construction of roads through a rock-bound country, and in loosening stubborn deposits containing a wealth of material. Indeed we do not hesitate to say that the high explosive is as much a weapon in the time of peace as it is in the time of war. Strange as it may appear it is that most inert of chemical elements, nitrogen, which exists so abundantly in the atmosphere we breathe, that is the essential constituent of modern explosives, such as expand on sudden combustion from nothing, so to speak, to infinity. It is the very inertness of nitrogen which makes it such a potentiality. It resents company and on the slightest provocation quits this company and returns to the gaseous state, occupying an enormously increased volume. This instability of nitrogen in a solid compound explains the enormous power of the modern nitro-explosive. Recent accounts from the seat of the war in South Africa have shown what a weapon in skilled hands is lyddite. We believe that the preparation of lyddite is a Government secret, but it is generally known that it consists of picric acid compressed into the smallest bulk by fusion. Chemists have always held the theory that the acme of force of an explosion is secured by supplying the oxygen in the

compound with an equivalent amount of combustible matter. But in the case of picric acid this is not so, for the oxygen necessary to form carbonic acid, the complete product, could produce a double volume of the incomplete product, carbonic oxide, which therefore would effect a much more considerable amount of work. Eventually the carbonic oxide burns into carbonic acid in contact with the air by the action of the flame of the explosion. Picric acid is made by acting upon carbolic acid with nitric acid. It possesses an enormous explosive force while curiously enough it is insensible to shock and its comparative stability is remarkable so that it may be transported with a minimum of risk. This is not so when it is mixed with other substances. Lyddite is of the same class of explosive as melinite, to which, indeed, it is closely related. On account of the properties just described it is safe to use when hurled in shells. We all cherish the hope that the day is not far distant when our swords shall be turned into ploughshares; and may we not hope also, to put it into language which modern science supplies, that the world's supply of nitrogen may no longer be used for the purposes of war but for the purposes of peace, and that in the near future we may turn our attention to utilising this wonderful element exclusively towards providing for the food-supply of the world? This is a problem which Sir William Crookes has suggested might be solved by converting the nitrogen of the air into nitric acid and eventually fertilising nitrate by the aid of electricity generated by colossal natural power such as exists in the fall of water at Niagara.

STREET NOISES, DOGS, AND THE LONDON COUNTY COUNCIL.

THE London County Council have issued a notice in the following terms: "Any unmuzzled dog found by the police in any public place in the county of London not under the control of any person and not wearing a collar upon which the name and address of the owner are legibly inscribed will be seized by the police and the owner will be liable to a penalty not exceeding £20." This is a wholesome regulation and one with which we have no quarrel. But we wish to ask the Council how it is that they can obtain the services of the police to arrest vagrant dogs. Not so very long ago the Council, though sympathising with the citizen driven distracted by street noises, implied that they were unable to do anything because they had no means of enforcing the law. Now if a policeman can arrest a dog he can also arrest a yelling newsboy. The "runner" is always a pest, but in war time he reaches a pitch of odiousness which is simply fiendish. Other towns have curbed the newsvendor, and in the words of the song, "Why should London wait?" The liberty of the press is a treasure not lightly to be thrown away, but we must protest against the manner in which catch-halfpenny journals advertise and exaggerate every rumour of disaster to our forces. Recently one of these journals, noted for its extreme objection to vivisection, came out with a flaming poster: "Big Battle, Terrible British Losses." These losses, as published in the journal in question, resolved themselves into 13 killed, 93 wounded, and three missing; total 109. There are aching hearts enough in the land and sorrow is sufficiently widespread without adding to such sorrow by means of posters which imply a great deal more than the truth. The same journal also made a feature of the reported sinking of a British troopship under circumstances upon which we do not comment, as the matter is now *sub judice*. We repeat that it is a sin and a scandal to British journalism that such procedures should be allowed. Such a frame of mind shrieks over the real or supposed sufferings of a guinea-pig, but ignores the sorrow that may be inflicted upon those whose dear ones are at the seat of war if by blood-curdling posters a few extra halfpence may be made. Such conduct should be put an end to.

LEGISLATION AND THE CONTROL OF VENEREAL DISEASE IN RUSSIA.

IN 1897 a Pan-Russian conference upon syphilis and venereal disease was held in St. Petersburg and a brief record of its labours appeared shortly after in the columns of THE LANCET.[1] A commission has been formed and is now sitting to carry out, as far as may be practicable, the recommendations made by that conference, more particularly as regards preventive legislation. The interval of two years has been taken up by collecting further information from the governors and other local authorities throughout the country as to the advisability and practicability of carrying out the recommendations in question. Circulars were addressed to these authorities and their replies are stated to form a mass of most valuable material relating to the prevalence and prevention of venereal diseases in Russia. The immense majority are agreed that the measures at present in force are entirely inadequate and that there is great need for radical changes in the law and in the powers of local authorities to deal with the evil. The greater number of replies are also in favour of leaving the control of the necessary measures in the hands of the local or municipal authorities, a minority preferring that the central Government should take up the matter and that the cost of measures should be provided out of Government funds. Fresh legislation may be expected in the near future dealing with the whole subject of syphilis and venereal disease in Russia—diseases which, as has more than once been pointed out in these columns, are almost incredibly rife in that country.

THE Council of the New Sydenham Society has, we understand, adopted for immediate translation Professor von Leinbech's treatise on the pathology of the blood, "Grundriss einer Klinischen Pathologie des Blutes für Aerzte und Studirende." Deviating somewhat from the custom of the society, the translation will be in some parts epitomised. This will be done with the approval and assistance of the author and will, it is believed, increase rather than otherwise the value of the work. The translation has been entrusted to Dr. Arthur Latham and Dr. Nachbar conjointly and the book is expected to be ready in about a year.

AT the annual general meeting of the Anatomical Society of Great Britain and Ireland, to be held on Friday next, Nov. 17th, 1899, the Council will nominate as President Mr. A. H. Young, F.R.C.S. Eng., M.B. Edin., Professor of Anatomy and Dean of the Medical Faculty in Owens College Manchester.

WESTMINSTER HOSPITAL, which was closed in July last to out-patients for structural and other alterations, has now been re-opened for the reception of these patients. To increase the accommodation for in-patients an additional story to portions of the building is in course of erection.

THE first meeting of the Incorporated Society of Medical Officers of Health will be held this (Friday) evening, Nov. 10th, at 197, High Holborn. The President (Dr. Newsholme) will give as his Presidential Address at 8 P.M. a Contribution to the Study of Epidemic Diarrhœa.

THE annual dinner of the Harveian Society will take place at the Café Monico on Thursday, Nov. 23rd, at 6.30 P.M. for 7 P.M.

[1] THE LANCET, Feb. 20th, 1897, p. 547.

THE WAR IN SOUTH AFRICA.

EVENTS succeed one another with such dramatic rapidity at the theatre of war in South Africa that it is difficult to preserve an adequate chronicle of them. It is to be borne in mind, however, that this is exactly what might have been anticipated. The only chance of success on the part of the Republican Governments depended on their being able to deal heavy and repeated blows on the British forces before any expeditionary army from this country could reach the scene of action. The Boers, are in the main, a straightforward, law-abiding, brave agricultural people, but they are very ignorant and are dominated by an ambitious, crafty, self-seeking set of rulers. There is no longer room for doubt we should think on the part of anyone that the Transvaal and Free State Governments have been preparing for this war for years past, that they were only waiting for a favourable opportunity to endeavour to assert their supremacy in South Africa, and that their diplomacy was in reality a pretence, for they have all along been determined not to concede any of that equality or of those rights and privileges which had been freely accorded by us to their countrymen in other parts of South Africa. War for supremacy in South Africa was from the first just as inevitable as that a collision must ensue where two locomotives are running in opposite directions on the same line of railway. We have, of course, not to discuss here the political aspects of the question, while the issue of the Boer ultimatum compelled the nation to put all such considerations on one side for a time. Nor are we in any way the chroniclers merely of the military history of the war. We hold a brief neither for General White nor for General Joubert (who seems to be an able tactician and an honest, humane man), and we have no sources of military information that are not open to everybody. But it seems to us that irresponsible critics altogether outside and beyond the scene of warfare are not in a position to know all the facts or to form a correct judgment of the actual situation or of the military policy pursued. Judgment had therefore better be suspended for the present. A general officer commanding is, of course, officially responsible for everything that takes place and especially so as regards any plan of operations emanating directly from himself; but it does not therefore follow, if some elementary principle has been neglected in carrying his scheme into effect, that the dropped stitch which rendered his piece of work futile is necessarily attributable to him personally, notwithstanding that he may promptly assume the sole responsibility for it. It is not altogether clear to us that in the matter of the disaster at Nicholson's Nek, for example, General White was personally chargeable with having overlooked the necessity of keeping the detached troops in touch with the rest of his force. General White's general plan of operations seems to have been throughout to harass the enemy as much as he could, in order to keep the Boers occupied in and around Ladysmith while he was himself retaining a firm grip of that place.

Ladysmith is now isolated and besieged and is the great centre of interest at the present moment. It is, by the way, worthy of being remarked that even supposing a large body of troops to have arrived at Durban they cannot be at once sent in relief of that garrison. It takes, with the best arrangements in the world, some time to equip and provide a force for such a purpose. The land transport needed for the conveyance of guns, ammunition, and supplies is considerable and will take some days to settle even should Sir Redvers Buller determine that he has sufficient force at his disposal to effect the relief. Ladysmith is not by any means the impregnable place that many suppose, but it is quite capable of being held and stoutly defended for some time by a determined and well-armed garrison. It all depends upon the number of mounted guns, the amount of ammunition available (especially for the heavy naval guns), and the supplies generally, and also upon the absence of epidemic disease among the troops, how long Ladysmith can hold out. There seems to be every reasonable prospect, however, of its doing so until it is relieved by a British force disembarking at Durban. We assume that the fleet at that port will, in any case, be able to hold Durban against the Boers and protect the troops against disembarking under an enemy's fire, even granting the unwelcome and unlikely supposition that the Boers have time now to attack and take Pietermaritzburg, and thus reach Durban.

The Army Medical Report for 1897 gives some information regarding Ladysmith and Pietermaritzburg which has some points of interest, but the conditions have no doubt undergone considerable change since then. Ladysmith was occupied as a new military station in May of that year. It is described as an exposed camp about two miles west of the town. The soldiers were then under canvas and exposed to a good deal of discomfort owing to dust-storms in windy weather and the muddy and swampy state of the ground during wet weather. Huts of wood and iron were then in process of construction and have since been completed. There was at that time no proper drainage for the removal of surface water and a pail system of conservancy was in operation, the contents being deposited about a mile north of the camp. The water was distributed by water-carts filled at a large tank connected by iron pipes with the municipal reservoirs (fed from the Klip river) situated near the camp. The water was filtered and boiled before being issued to the troops. It is mentioned that the health of the camp had not been satisfactory since the previous October, owing to the prevalence of continued fever and enteric fever, dysentery, and ague. The possible importance of Ladysmith as a military station had no doubt attracted attention in 1897, although the part it was destined to play could not then have been foreseen; still, it probably led to the introduction of some important sanitary changes. At Pietermaritzburg enteric fever was said to have been very prevalent and the sanitary condition of the locality, especially in respect of the prevention of soil pollution, left much to be desired. The water-supply is described as being scarce, but a new water tower was being erected in 1897 to remedy this. The hospital arrangements were said to be inadequate to the requirements; and as the available space in the hospital grounds was occupied by marquees and the cavalry barracks were utilised as hospital wards, the amount of hospital accommodation afforded in permanent buildings seems to have been insufficient at that time. This is not, however, a matter of any great importance so long as there is plenty of accommodation available under canvas.

It is a platitude to say that it is now a subject of regret that we had not long ago a far greater strength of British troops present in South Africa than we had at the ontbreak of war, but it is easy to be wise after the event. No time was lost, however, in mobilising and embarking a large force from this country when war became absolutely certain. If the admirable arrangements which have been made and carried out are open to any adverse criticism it would be that the larger bulk of the force should have been sent out at first, for as President Kruger gave only 48 hours for us to agree to his ultimatum it was clear that the forces of the Transvaal Government intended to seize their great chance of success and to strike, and at once, a succession of heavy blows.

The transports selected have generally been fine roomy steamers, some of them magnificent vessels, and notably so in the case of the *Kildonan Castle*, of 10,000 tons burthen, which carries out nearly 3000 troops to the Cape and has hospital accommodation for 80 sick. The troops on this occasion have been provided with an amount of accommodation and appliances such as would not have been dreamed of a few years ago. The ships have been fitted out, too, and reconstructed for the use of the troops, with remarkable promptitude. Hospital ships have already arrived in South Africa and others will speedily follow, supplied with everything that modern science can suggest. In those hospital ships which have been provided by private enterprise, as in the case of the American hospital ship, firms have vied with one another in supplying all the necessary stores, whether of food, clothing, medical comforts, or the latest and most portable forms of medicaments and surgical aids and appliances. Messrs. Burroughs, Wellcome, and Co. have generously undertaken to provide all necessary medicines, and consignments of tobacco, meat extracts, and specialities of all kinds are forthcoming from other firms. The departure of the troops has been generally attended by enthusiastic crowds. Sir William Mac Cormac and Mr. Makins, by the way, had a great "send off" from Waterloo Station, and Mr. Treves is, we understand, receiving the same attention to-day (Saturday) from the students of the London Hospital.

With regard to the correspondence that has taken place in

the *Times* as to the care of our sick and wounded we may here say a word. The proposal has been made that in times of peace a deliberate governmental coalition should take place between the heads of the Army Medical Service and eminent civilian hospital surgeons with the view of obtaining and utilising the services of some of the latter in times of war. Not only, it is contended, should such hospital surgeons be of recognised professional eminence but they should also be of an age and physical fitness for the work. Germany has devised and adopted a system of this kind and there is therefore no reason why a similar scheme should not be carefully considered and organised as far as this country is concerned. There might be established a special list of such hospital surgeons as were willing to proceed to the theatre of war when called upon with the view of acting in a consultative or, where specially desirable and needed, in an operative, capacity. We quite recognise the difficulties in the way of utilising the services of hospital surgeons and experts on a large scale, not so much on the score of expense as of practicability under the exigencies and in the turmoil of war and active service in the field. War is an epidemic of wounds and injuries, but differs from any epidemic sickness from the fact that on the battle-field all the wounds may be said to occur at one and the same time. It would in a big battle tax the powers of our army surgeons, even when supplemented by the surgical staff of all our metropolitan hospitals, to render the necessary aid and to diagnose and select such cases as required the special skill of the expert. But that is not exactly the situation contemplated and there is no reason why a scheme should not be devised in time of peace for utilising the services of our hospital surgeons to a larger extent than is done at present. There is no doubt that even a limited staff of surgeons of this kind could not fail to prove of great value in a consultative as well as in an operative capacity where unusual skill and experience were requisite, to say nothing of the surgical advances that might result therefrom in our scientific methods of procedure. Listerism and the use of antiseptic agents in modern practice have altogether revolutionised the art of surgery, and it goes without saying that the treatment of certain wounds demands an amount of skill that can only be acquired and maintained by a corresponding amount of practice which makes the procedures almost automatic on the part of the surgeons to big general hospitals The modern method of stripping a battlefield and of systematically relegating the sick and wounded from the front to the rear of a fighting force is not conducive to the elaboration of surgical details, and the successful practice of abdominal surgery, except at stationary war hospitals, will be always beset, we fear, with difficulties. What is especially wanted in military practice is to find out some sort of simple and irreducible minimum essentially required for antiseptic surgery and divested, as it were, of all unnecessary ritual.

MEDICAL ARRANGEMENTS.

The arrangements with regard to the *personnel* of the Staff and Regimental and Field Medical Units have already been published in THE LANCET.[1] The following are the general arrangements of the Medical Division of the War Office for the Field Force in South Africa:—

The Army Corps and Cavalry Division is entirely equipped with the new (1898) pattern of medical equipment and supplies, and as far as possible units on the lines of communication are similarly equipped, while the following extra articles are held in base depôts of medical stores:—Acetylene lamps, Japanese air cushions, anæsthetics, antiseptics, antiseptic cases, creoline, folding darkrooms for x-ray work; antiseptic dressings, various; inhalers for ether, and Clover's; Murphy's anastomosis buttons (in sets); platinum studs for x-ray coil; anti-streptococcic serum and syringes; anti-tetanic serum and syringes; aseptic absorbent sponges (three sizes); Schimmelbusch's sterilisers.

Ten sets of Roentgen ray apparatus have been provided. Two of these are already in Natal, one is allotted to each general hospital, and the others will be sent to such posts as the principal medical officer may select. Numerous articles of equipment have been added to the ordnance equipment given in detail in the Army Forms, chiefly designed towards the filtering of water, the sterilising of milk, and the antiseptic performance of surgical operations. Two of Thresh's portable disinfectors are included in this supplementary list; one will be located in Natal and one in Capetown, but either can be transported at will by road or rail.

No special sanitary officer is appointed to the forces, nor is any such appointment provided for in war establishments, but the medical arrangements entail "ceaseless vigilance over his particular charge" upon every medical officer, who is thus constituted an *ex-officio* sanitary officer. For the guidance of medical officers the War Office issue Sanitary Notes on the Climate of Natal and the Transvaal and on the prevailing diseases. The chief characteristics of the climate are given as follows:—

"1. *Temperature.*—In the high country the days are very hot, the nights usually cool. There is consequently great diurnal variation. In Maritzburg, for example, an absolute maximum of 105° F. has been recorded with an absolute minimum of 52·3° F. at the same time of the year and almost within the same 24 hours, while even in the winter months there is often a maximum of 84° F. with a minimum of 33·8° F. Ladysmith, which is at an elevation of 3285 feet, is equally subject to great diurnal variations, which are said to render the place insalubrious at some seasons. In midsummer (January) the heat there is at times intense. In Pretoria the variations are not so great, the maximum temperature in January, the hottest month, reaching 90° F., while in the coldest months (July and August) the temperature falls to a minimum of only 30° to 42° F. The mean monthly temperatures in Pretoria are 72° to 77° F. in the hottest month (January) and 55° to 59° F. in the coldest months (July and August). In the low-lying coast towns and belt of alluvial plain, five to 15 miles in extent, between the coast and the hills, the climate has the characters of a moist tropical climate and is damp and enervating and hot.

"2. *Rainfall* is about 30 inches annually in the high lands, and almost the entire fall is in the hot months—namely, from October to April, the greatest fall being in January and December. The rainfall is usually accompanied by severe thunderstorms. In May, June, July, August, and September there is very little rain. Hailstorms are at times very heavy and destructive and snow falls on the High Veldt (i.e., in the Drakensberg district) in winter.

"3. *Winds.*—A fresh south-east wind blows almost constantly in winter in the inland districts during the day. These winds blow frequently, too, in the hot summer months; but from December to March there are often north-east or north winds accompanied by much dampness and haze. In the Drakensberg district the south-east winds are biting and cold."

The following precautions are required on account of climate: (1) Warm blankets and abdominal belts are required as protection against the diurnal variation of temperature; (2) waterproof sheets and cloaks as protection against heavy rains; (3) suitable headdress as protection against sun; and (4) warm clothing even in summer in the Drakensberg country.

The prevailing diseases are:—

1. *Enteric fever*, which is described as being very prevalent, especially in the high lands. It was epidemic in Utrecht during the Zulu War of 1879, at Newcastle after the Boer War, at Ladysmith, and generally throughout these districts. Pietermaritzburg suffers year after year, and since the re occupation of Ladysmith in 1897 the garrison has suffered severely. The first cases are likely to occur a few weeks after the onset of the rains—i.e., in October. The earlier months of the year (February, March, and April) are the months of greatest prevalence. The streams and rivers are constantly being polluted by adjoining habitations and also by the carcasses of dead animals; but an equally potent cause of enteric fever in South Africa is the neglect of conservancy arrangements and the constant pollution of soil that is taking place. It must not be forgotten that one of the chief sources of infection in camping grounds is the urine of people who are suffering from, or have suffered from, enteric fever; and in addition to the usual precautions required in connexion with the water-supply, such as boiling and filtration, the daily use of disinfectants in all latrines, urine tubs, soakage pits, &c., becomes essential.

2. *Dysentery and diarrhœa.*—These diseases are very prevalent in the low-lying coast country where they are said to have a malarial origin. They are also equally prevalent in the high lands, where they are induced by wettings, chills, and exposure to fatigue, especially when these conditions are

[1] THE LANCET, Oct. 14th, 1899, p. 1034.

associated with overcrowding of camping grounds and pollution of soil and water. Protection of the abdominal viscera by suitable clothing is essential in the prevention of these diseases, in addition to the details of camp sanitation already referred to. A peculiar form of diarrhœa is said to be epidemic in the Transvaal before the rainy season. Dr. Livingstone considered that nothing would cure it until the rains set in.

3. *Malarial fevers.*—The low-lying coast country is very malarial and fevers, probably malarial, are very prevalent also in the Tsetse fly districts—namely, the country between the Drakensberg and the coast north and south of Delagoa Bay and the country stretching to the Limpopo River from the Blauberg and Zoutpansberg ranges. March, April, and May are the most malarial months and traders will not pass through these districts at that time of the year. Malarial fevers disappear entirely in the higher plateaux of northern Natal and Zululand, but they are carried up some of the valleys. Higher grounds should therefore be selected for camps and valleys avoided.

4. *Parasitic diseases.*—Intestinal parasites are very common in South Africa. Eating uncooked vegetables, watercress, salads, and insufficiently cooked liver, kidneys, &c., of infected animals is therefore to be avoided. In the low-lying coast country hæmaturia ("red water") is common both among men and animals.

5. *Ophthalmia.*—This affection is prevalent in the Transvaal, and is similar to Egyptian ophthalmia. It occurs mostly during the cold dry months before the rains, often in epidemics.

6. *Pneumonia* also often occurs in epidemics in the Transvaal at the same season of the year as ophthalmia.

Filters of the "Berkefeld" pattern will if possible, be supplied to each company or similar unit of 100 men, and all the necessary precautions for cleaning, handling, and moving them are laid down in the directions to the medical officers.

The rations for the troops will be as follows:—

Meat: 1 lb. fresh, salt, or preserved. Maconochie's ration = a ration of meat. When the supply of cattle is abundant the ration of 1 lb. fresh meat during active operations may be increased by the general officer commanding to 1½ lb. Bread: 1½ lb. fresh bread or 1 lb. biscuit or 1 lb. flour or meal. Groceries: ½ oz. coffee and ½ oz. tea, or double ration of either; 2 oz. sugar, ½ oz. salt, $\frac{1}{16}$ oz. of pepper; ½ oz. chocolate or cocoa when given in lieu of tea or coffee. Lime juice: $\frac{1}{10}$ gill with ¼ oz. sugar when fresh vegetables are not issued or when the medical officer thinks it necessary. Vegetables: 1 oz. compressed or ½ lb. potatoes or other fresh vegetables, or 2 oz. split peas or ½ lb. onions, or 2 oz. rice. Spirits: ½ gill, when notified in general orders. Tobacco: not exceeding 1 lb. per man per month from Army Service Corps on repayment; price to be fixed by the general officer. Light: hospital as required; guards, horse picquets, officer's offices, 1 candle per lantern authorised. Fuel: 1 lb. wood or coal, not to be issued when it can be obtained by the troops on the march. This is the maximum ration and will be only issued when available. Cow dung is a substitute on emergency.

The scale of daily rations for civilian subordinates will be as follows:—(*a*) White conductors same as European soldiers. (*b*) Native employés, including drivers and leaders: 1 lb. meal, biscuit, or bread; 1 lb. fresh or preserved meat; 2 oz. sugar, 1 oz. coffee, or ½ oz. tea; and ½ oz. salt.

The Government having approved, in January, 1897, of the accession of the Government of the South African Republic to the Geneva Convention, the same will be in force during the continuance of hostilities in South Africa. Brassards will be issued and worn on the left arm by all medical officers attached to staff and regimental units and by the entire *personnel* of medical units on such occasions as may be notified by principal medical officers. Medical officers must be on their guard against permitting persons outside the army medical organisation interfering with the arrangements made for the care of sick and wounded under their charge. Voluntary aid is accepted through the Central British Cross Committee, which will be represented in South Africa by one or more commissioners and by a distinct committee; and vigilance must be exercised to prevent the use of brassards not properly authenticated by them.

Two hospital trains have been sanctioned—to be increased if necessary: for these the staff as regards medical officers has already been published in THE LANCET. The remaining *personnel* will be provided locally under orders of general officer commanding. The two sick transports No. 1 and No. 2 (ss. *Spartan* and ss. *Trojan*) will be utilised in the first instance for conveying invalids from Durban to Capetown for transfer to the base hospital at Wynberg, but they may also at any time be diverted for the transport of sick to England from South Africa at the discretion of the Inspector-General Lines of Communication. We have already described the accommodation available on board the transports.

In addition to the transports, a hospital ship capable of conveying about 200 patients will be provided by the Central British Red Cross Committee, the *personnel* being nominated by the Director-General, Army Medical Service; this vessel will be utilised exclusively for the conveyance of invalids from South Africa to England, and special instructions as regards its administration will be issued hereafter to all concerned.

The following is the list of medical comforts for use of the sick on board the ss. *Trojan* and ss. *Spartan*, in addition to articles for ordinary hospital diets:—Arrowroot, cornflour, oatmeal, pearl barley, ground rice, sago, cocoatina (tins), condensed milk (sweetened), condensed milk (unsweetened), calves' feet jelly, bovril (in 4-oz. tins), Liebig's extract of meat (in 4-oz. pots), Brand's essence of beef, Brand's essence of chicken, Brand's essence of mutton, mutton broth, chicken broth, solidified soup, Stower's Cordial lime juice, refined sugar, pickles (various), Hennessy's three star brandy, Scotch and Irish whiskey, champagne (in pint bottles), port wine, sherry wine, claret, Burgundy, Australian, Emu, and Hermitage, Bass's or Allsopp's beer, lager beer, Guinness's stout.

TAUNTON AND SOMERSET HOSPITAL.—£1000 have been subscribed in Somerset as a memorial to the late Colonel Chard, V.C. It has been decided to erect a memorial bust and to endow a bed in the Taunton and Somerset Hospital for a Somerset-born soldier, his wife, widow, or child.

BRADFORD AND WEST RIDING MEDICAL UNION.—At a general meeting of the above society held in Bradford on Oct. 19th the President (Dr. Hime) introduced Mr. R. B. Anderson on behalf of a deputation of the Corporate and Medical Reform Association, Limited, originally known as the Corporate and Medical Reform Committee.—Mr. Anderson said that affiliation between the association and other societies had provided a satisfactory working basis of coöperation now embracing ten independent societies, including those at Hull and Newcastle. Each affiliated society subscribed to, and was represented in, the association according to its size—namely, half a guinea per annum and one representative for every 50 members in the affiliated society. The policy of the association was the same as that of the committee, which had secured the approval of Sir Walter Foster, M.P., Mr. Victor Horsley, and Mr. George Brown. The policy of leaving the reforms of particular bodies to special committees of members or graduates of those bodies worked well, as had been seen in the cases of their special committees of Fellows and Members of the Royal College of Surgeons of England and of members of the British Medical Association.—The following motion was brought forward by Dr. Mackenzie, seconded by Dr. S. Lodge, jun., and unanimously adopted: "That the Bradford and West Riding Medical Union, in support of the memorial of the Corporate and Medical Reform Association, Limited, hereby expresses its strong disapproval of unauthorised societies or of any registered medical practitioners arrogating to themselves the power to grant 'certificates of proficiency' or 'diplomas' in any branch of medicine, surgery, or midwifery, as being contrary to the Medical Acts and opposed to the interests of the public and of the medical profession, and records its profound regret that the General Medical Council has given its sanction to this illegal practice by approving of a form of 'diploma' for midwives to be conferred by the Obstetrical Society of London on candidates who have passed its examination, and further expresses the firm conviction that the General Medical Council should rescind the sanction so given, and directs that a copy of this resolution be forwarded to the Privy Council and to the General Medical Council."—It was also moved by Dr. Mitchell, seconded by Dr. Mackenzie, and unanimously carried: "That this union do enter into association with the Corporate and Medical Reform Association, Limited, subject to confirmation of this resolution by the next general meeting."

Obituary.

WILLIAM CHRISTOPHER ARNISON, M.D. DURH., D.C.L.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF DURHAM; CONSULTING SURGEON TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

IN the early morning of Nov. 4th Dr. William Christopher Arnison died at his house, Fenham-terrace, Newcastle-upon-Tyne, after an illness of only a few days' duration. On Saturday, Oct. 28th, he was at the Royal Infirmary in his usual health watching the operations, and arranged to attend the funeral of the late Dr. Jeffreson. On Oct. 30th he lectured in the evening but complained of being unwell. Later he was seen by Dr. G. Armstrong Atkinson who found him collapsed and seriously ill, complaining of great difficulty in breathing and of severe pain in his left chest. He passed a fairly good night, but during Wednesday he grew worse, suffering still from great difficulty in breathing and intense pain in his right chest. His nephew, Dr. W. D. Arnison, was with him during a good part of the day and at night he expressed a wish to see his old friend and colleague Mr. Page. During the night he became much worse and Dr. Atkinson and Dr. W. D. Arnison remained with him, doing all that was possible to be done for his relief and comfort. On Thursday morning he was much exhausted, his respiration was very quick and shallow, but he was suffering less pain and taking support freely. He passed a somewhat more comfortable night and on Friday made his first and only rally. His pulse, which had been irregular, became steady, his temperature fell, and he was for a few hours better than he had been during his seizure. As the day advanced he grew worse, his pulse became more irregular, the temperature rose, he was restless and much distressed in breathing. In this pitiable condition he continued till 5 A.M. on Saturday when he died, preserving consciousness till the last.

PROFESSOR W. C. ARNISON.

Dr. Arnison came of a good old medical stock. His father, two uncles, and a brother, all practised in the neighbourhood of Allendale, Northumberland, where Dr. Arnison was born. For nearly 40 years he was connected with the Royal Infirmary as resident pupil, surgeon, and consulting surgeon. 16 years ago he became the colleague of his old master, Dr. G. Yeoman Heath, in the chair of Surgery, and at Dr. Heath's death he was appointed Professor of Surgery in the University of Durham. Some eight years ago he established in Newcastle a surgical aid society which he continued to preside over till his death. This society has been a great success and is doing good work in the north of England. He held other responsible positions and among them that of President of the Surgical Section of the British Medical Association at its last meeting in Newcastle. He was consulting surgeon to the Knight Memorial Hospital at Blyth and for many years surgeon to the Post Office, Newcastle-upon-Tyne. Dr. Arnison was universally respected and particularly by his students and patients, who best knew his sterling worth. A few years ago when the age limit compelled him to resign his position of surgeon to the Royal Infirmary his pupils entertained him at dinner and presented him with a silver bowl as a token of their affection for him. He was a thoroughly straightforward, honest man, doing his duty conscientiously and fearlessly, kind and considerate to all. A staunch friend and without enemies, he was one of whose character the profession may well be proud. He was 62 years of age and leaves a widow and three young children. Following so soon after that of Dr. Nesham, Dr. Arnison's death is a severe blow to the College of Medicine of the University of Durham.

"The Wine of Life keeps oozing drop by drop,
The Leaves of Life keep falling one by one."

The funeral took place on Nov. 7th and was very numerously attended, not only by members of the profession, among whom the deceased was universally popular, but by the general public. The coffin, covered with beautiful flowers, had been placed in St. Andrew's Church. Dr. Arnison was the vicar's churchwarden. Early in the morning the Holy Communion was celebrated by the Lord Bishop of Newcastle who was a personal friend of the deceased. At the burial service, conducted by the Rev. Canon Lister, D.D., and the curates of the parish, the church was packed. The members of the College of Medicine and the Infirmary staff were all present, and the University of Durham and the College of Science were represented by the Venerable Archdeacon Watkins and Canon Fowler, M.R.C.S. Eng., Principal Gurney, Professor Benson, Professor Stroud, Professor Potter, and others. The body was borne from the church to the hearse and from the cemetery gates to the grave on the shoulders of medical students, some 150 of whom headed the procession. Among the mourners were the governor and chaplain of the infirmary, representatives of the infirmary committee, and a number of nurses.

THOMAS HAMMOND, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.,

DEPUTY MEDICAL OFFICER, H.M. PRISON, LIVERPOOL.

THIS esteemed medical officer in Her Majesty's Prison Service has been cut off in the prime of life by an attack of apoplexy. Born in Whitehaven, Mr. Hammond studied medicine at Guy's Hospital, on leaving which he obtained a special honorary certificate for the satisfactory manner in which he discharged the duties attached to the various appointments held during his curriculum. After qualifying in 1877 he was successively house surgeon to the Halifax Infirmary, house physician to the Bradford Infirmary, and clinical assistant at the West Riding Asylum, Yorkshire. These appointments afforded him an invaluable opportunity of learning not only practical medicine but also of becoming thoroughly acquainted with the various phases of mental diseases, work which was of the utmost service to him officially in his after-career. Early in January, 1883, he was appointed deputy medical officer of Walton Gaol, Liverpool, one of the largest local prisons in the kingdom, and he filled this post until the end of his life, as he did not wish for either transfer or promotion. He was offered the latter by Her Majesty's Commissioners for long and faithful services, but he felt constrained to decline to leave the neighbourhood and the society of his very numerous Liverpool friends. He handled his peculiar work very skilfully and was exceedingly quick in detecting the genuine cases of illness among prisoners from the false. He was surgeon-captain in the 1st Lancashire Volunteer Artillery and for many years was a member of the Conservative Club in Liverpool but took no active part in politics. He married in 1895 and leaves a widow and two young children. His geniality, kindness, and good nature were of late (due to the onset of an insidious kidney mischief) marked occasionally by a brusqueness quite foreign to his real feelings—which were those of a good old English gentleman. In him the prison service has lost a good servant, while the widow and children mourn the loss of a loving husband and father.

THE USE OF MEDICAL CHARITIES.

AT the fifth ordinary quarterly meeting of the East Suburban Medical Protection and Medico-Ethical Society, Limited, invitations were issued to similar bodies and to many medical men to be present to hear Mr. C. S. Loch, the secretary of the Charity Organisation Society, give an address upon the Use of Medical Charities. The meeting was held at the Town Hall, Stratford, E., on Nov. 7th, Dr. F. J. SMITH presiding, and it must have been a disappointment to those responsible to find that the meeting was not well attended.

Mr. LOCH said that he approached the subject as one who was interested in the charitable side of medical work. He pointed out that from the evidence of documents relating to our large London hospitals these charities were founded originally for the really necessitous poor. People outside this class, however, now received gratuitous treatment and the real friends of charity were fearful lest there should be created a general habit of dependence which would affect not only the administration of medical but of all charities. It was quite clear that in the first 20 years of this century the number of out-patients was comparatively small, but in the last 40 or 50 years the growth had been quite extraordinary and the cases were not extreme cases of urgent need but such as could be treated better by a general practitioner in the neighbourhood. Referring to the letter system the speaker said that the old letter was a letter from a person who knew the applicant addressed to the board of the charity and a discretionary committee on the board dealt with the case. In those days that was possible as the number of applications were few. That fact showed that in admitting out-patients in very large numbers they had altogether broken away from the old machinery and had not substituted any newer. He was surprised to find that at many hospitals there was no system of identifying patients who had attended on previous occasions and had come again and again. From inquiries which he had made amongst general practitioners it was clear that many attended hospitals because they were the cheapest markets, and he deprecated the acceptance of payment by hospitals. Hospitals were, then, (1) for the treatment of the necessitous poor; (2) they were necessary as educational centres for the students; (3) they were also necessary every whit as much for the instruction of those who were teaching the students; and (4) there was the interest which the general practitioner had in them. For their proper working there should be what he called "quadrilateral equipoise." He maintained that rigorous inquiry should be made into the merits of cases, that trivial cases should be excluded, and that medical men should be adequately represented on hospital boards. Further, to get the greatest amount of usefulness from hospitals they should be made coöperative.

Colonel MONTEFIORE said that in many conversations which he had had with members of the working classes they had admitted that they went to hospitals rather than to the general practitioner because the hospitals were cheaper.

Dr. F. J. SMITH (the chairman) said that in Mr. Loch's address he heard an echo of his own feelings. With regard to the question of education, and speaking as a hospital physician, he said that if the numbers in the out-patient departments were cut down two-thirds he could teach better and the students would have all the experience they required.

Mr. M. HOUGHTON, the honorary secretary of the society, proposed the following motion:—

> That this meeting of the East Suburban Medical Protection and Medico-Ethical Society, Limited, and other medical practitioners, are of opinion that as a means of preventing the misuse of medical charities—supported wholly or in part by voluntary contributions—medical men should be elected on the governing and executive bodies of such charities in a proportion of not less than 25 per cent. Such representatives to be periodically elected by the medical practitioners in the vicinity, and that this meeting hereby invites the medical profession as a whole to support this policy, and that copies of this resolution be sent to the various medical societies requesting their support, and to the press.

Mr. R. F. TOMLIN seconded the motion, which was passed.

A vote of thanks to Mr. Loch was carried with acclamation and closed the proceedings.

ASYLUM REPORTS.

West Riding Asylum, Wakefield (Annual Report for 1898).—The average number of patients resident during the year comprised 721 males and 694 females, a total of 1415. During the year 342 patients were admitted; these consisted of 191 males and 151 females. The total number of patients discharged amounted to 187. Of these 145 were discharged as recovered, 31 as relieved, and 11 as not improved. The deaths during the year amounted to 152 in number—viz., 84 males and 68 females. In relation to the average number resident the recoveries for the year amounted to 10·2 per cent. and the deaths to 10·7 per cent. With regard to the recovery rate Mr. Bevan Lewis, the medical superintendent, observes that "having regard to the very unfavourable character of those admitted we may regard this result as a highly satisfactory one." Among the causes of death (Table V.) general paralysis is responsible for 36, while phthisis and tuberculosis have 22 victims. Pneumonia is the cause of death in eight cases, bronchitis in four, carcinoma in six, and chronic Bright's disease in seven cases. Cerebral atrophy comprises eight cases and cerebral softening and hæmorrhage 10 cases. Senile decay is the cause of death in 11 cases and one case is recorded as due to traumatic laceration of the brain. An epidemic of influenza broke out in March, 1898, but the disease was of an exceptionally mild character, five patients only having succumbed. Enteric fever attacked six patients during the year and in two cases proved fatal. An "acute" hospital block for recent and curable cases is now approaching completion. Two separate blocks for farm-workers are being built at the rear of the hospital, while it is proposed to accommodate the imbecile and idiot patients in a separate building. "Thus will be secured for the medical staff the means of devoting all their attention and skill to the treatment of recent insanity at the acute hospital." Electric lighting plant has been now fitted up for the old and new buildings. No reference is made to provisions for isolation and the open-air treatment of phthisical patients or to the prevention of risk in the matter of milk-supply and the dangers of tuberculous infection therein. The Lunacy Commissioners in their report draw attention to the fact that the means of escape and exit from various dormitories and parts of the building in case of fire are still very inadequate. "This state of affairs occurs not only in the basement, but in dormitories four stories high, the number of lives endangered varying from eight in the so-called hospital dormitory to 36 in the south dormitory and to 45 epileptics in the dormitory attached to No. 35 ward." They also call attention to certain dangers with regard to the arrangements for cold and hot water in the general bath-room.

Hereford County and City Asylum (Annual Report for 1898).—The average population of this asylum during the year was 438 and comprised 218 males and 220 females. The admissions included 81 cases—viz., 44 males and 37 females. Amongst these were 16 patients who had been discharged before and were re-admitted during the year, 10 of these being males and 6 females. The discharges numbered 50 and consisted of 34 males and 16 females. The number of cases discharged as recovered reached 25, which was 5·8 per cent. of the average number resident. The medical superintendent, Mr. C. S. Morrison, in his report to the committee says that there seems more than usual reason to deplore the character of the cases admitted as holding out little hope of recovery in the great majority of them. Thus as regards the female patients admitted 35 per cent. were over 60 years of age, while of the males 25 per cent. were over that age. Another undesirable feature presented in the admissions was the high percentage of congenital cases, as many as 16 per cent. of the total number admitted being of congenitally weak mind. The number of deaths was 28. The percentage of deaths to the daily average number resident during the year was 7·81. The number of deaths chiefly attributable to old age and its accompanying decay had been unusually large. "Of the 28 deaths one male and one female died after 43 years of continued residence in an asylum, and two females after 41 and 37 years respectively." The causes

of death were general paralysis in 12 cases, phthisis pulmonalis in four, atrophy of the brain in 20, influenza in 20, while cancer of the liver gave the alarming total of eight deaths. The want of an isolation block for infectious cases is strongly urged by the medical superintendent.

Devon County Lunatic Asylum (*Annual Report for 1898*).—The population of this asylum consists of 1116 patients—viz., 454 males and 662 females. The admissions during the year amounted to 146, of which 73 were males and 73 females. The discharges numbered 81 and consisted of 36 males and 45 females. Among the discharges 44 patients (19 males and 25 females) were classed as recovered, which is 3·9 per cent. of the average number resident—a low recovery rate. The average number resident was considerably in excess of any former year. Dr. G. J. S. Saunders, the medical superintendent, states in his report to the committee that "the doors were often closed to all but acute and urgent cases ..... the difficulty of providing make-shift room for new-comers was very great ..... and the depressing and injurious effects of overcrowding, on the mental and bodily health of the community, are of equal, if not greater, importance. Disorders attributable to defective hygienic conditions were too common, such as tuberculosis, diarrhœa and dysentery, erysipelas, and furunculoid diseases. ..... Patients not infrequently are suffering on admission from tubercular diseases of various kinds, but such disease ought not to originate in the asylum. ..... Conditions in Devon are most favourable to the open-air treatment." There were 57 deaths—28 being males and 29 females. 14 deaths were due to general paralysis, eight to phthisis or other forms of tuberculosis, five to cardiac disease, four to senile decay, and three to cancer.

Joint Counties Asylum, Carmarthen (*Annual Report for 1898*).—The average number of patients resident during the year was 618 and consisted of 307 males and 311 females. There were admitted during the year 87 patients—viz., 49 males and 38 females. The following causative agents were ascertained regarding the admissions. 37 were due to heredity, 16 to alcoholic excess, 14 to trouble and adversity, 11 to the climacterium (in women), seven to epilepsy, six each to mental shock and to senility, four each to onanism and to cranial injury. In 11 there existed a considerable congenital basis for the insanity. Of the admissions 14 were actively suicidal. Dr. E. Goodall, the medical superintendent, states that 31 per cent. of the patients admitted were in feeble health and should have been brought in earlier before they had "become reduced physically by refusal of food and insomnia." The number of cases discharged as recovered amounted to 26, or 4·2 per cent. of the average number of patients resident. The number of deaths amounted to 53, a ratio of 8·5 per cent. as calculated on the same basis. Eight of the deaths were due to general paralysis, four to chronic cerebral atrophy, five to Bright's disease, and 15 to pulmonary tuberculosis. The mortality from pulmonary tuberculosis is "undesirably high" and it is admitted that separation of such cases in a detached block for open-air treatment would be desirable, though this would entail a considerable original outlay. All the milk supplied to the institution is boiled before being used as a routine practice. A few cases of enteric fever and of colitis have appeared. Many alterations in warming and ventilation are in progress.

Lanark District Asylum (*Annual Report for 1898*).—The average daily population during the year was 522, and consisted of 283 males and 239 females. There were 256 admissions during the year, an amount considerably in excess of those of previous years. "A larger proportion than usual appeared to be hopeless as regards any chances of recovery, for 38 gave evidence of organic brain disease, 35 of chronic mental disease, and 17 were hopeless senile cases." Dr. A. Campbell Clark, the medical superintendent, further states that nine patients were admitted in a moribund condition. 93 patients were discharged as recovered, a ratio of 17·8 per cent. of the average population. The deaths amounted to 58, a ratio of 11·1 per cent. as calculated on the same basis. A severe and prolonged epidemic of influenza prevailed for about six months. "It affected the officials in a larger proportion than the patients, and for this reason the management was seriously handicapped for a long time." A male patient died at the age of 73 years after 21 years of residence, while another died at the age of 48 years after 23 years' residence.

REFORM IN THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

STATEMENT PRESENTED TO THE LORD PRESIDENT OF THE PRIVY COUNCIL ON BEHALF OF THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS IN REFERENCE TO THE APPLICATION BY THE COLLEGE COUNCIL FOR A SUPPLEMENTARY CHARTER.

THE proposed Charter is intended to enable the Council to confer Honorary Fellowships on persons of distinction as a means of celebrating the centenary of the granting of the original Charter in 1800. The Lord President may be aware that unsatisfactory relations have existed for many years between the Council of the College and the Fellows and Members. It is submitted that the provisions of the proposed Charter are very inadequate, inasmuch as they do not tend in the slightest degree to terminate the dissensions which have so long prevailed.

At the time of the application for the last Supplementary Charter of 1888 the attention of the Privy Council was called to the grievances of the Members by a petition signed by 4665 of their number and by a statement presented by the Association of Fellows of the College. To these documents (presented to the Privy Council in May, 1887) the Lord President is referred. The Supplementary Charter was then granted, but only so far as it related to subjects on which there was no controversy with the Fellows and Members. Unfortunately, this method of dealing with the disputed matters was far from successful. Within a very short time the College Council and the Members were engaged in litigation on the question of the right of the latter to meet in their own College, and there have subsequently been continuous disputes on numerous points, all arising out of the persistent refusal of the Council to grant the Members a limited representation on the governing body of the College.

The Council some years ago passed a resolution agreeing to consult the Fellows and Members on all important matters affecting the external relations of the College. Accordingly a meeting was held on July 5th last for the consideration of the present draft petition and Charter. After full discussion the following resolution was then carried with only eight dissentients:—

That this meeting of Fellows and Members, summoned by the Council to consider the terms of a proposed new Charter, is of opinion that the powers asked for are inadequate and that no Charter should be granted which does not give to the Members some representation on the Council.

The following was also carried unanimously:—

That this meeting requests the Council to postpone a final decision as to the terms of the new Charter until a memorial which is in course of signature has been received and considered.

This memorial, which has been printed in THE LANCET, was signed by over 700 Members in less than a fortnight, but, like every other attempt to propitiate the Council, it failed. The memorialists were informed that the Council was introducing only one matter into the Supplementary Charter and that the inclusion of anything else would be "inopportune."

The attention of the Lord President is particularly drawn to the fact that the Council having called a meeting to consider the draft Charter entirely disregarded the resolution passed by that meeting declaring the provisions of the Charter to be inadequate. This is in harmony with the habitual practice of the Council owing to its non-responsibility to the Members. It is in the power of the Privy Council to put an end to the present anomalous state of affairs by refusing to sanction any Charter which does not grant the Members a reasonable representation.

By the Charters the body corporate of the College is declared to consist of the Members; the entire property of the College is vested in them and they provide by far the greater part of the annual income, yet they have no control whatever over the expenditure and no share in the government. Their difficulties are not understood by the Council, which is entirely composed of hospital surgeons, and their requests are persistently refused. They have to obey by-laws made by persons who have interests distinct from their own and by a body in which they have no representation. They are governed by an irresponsible oligarchy and in all collegiate matters they are as far as possible ignored.

The present mode of government of the College is an

anachronism and is out of harmony with the representative institutions of our country. It is therefore respectfully urged that your lordship will, on grounds of public policy, either refer this Supplementary Charter back to the Council of the College in order that provision may be made for the representation of Members, or that, before granting any Charter, you will hear the Society of Members of the Royal College of Surgeons by counsel.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Enteric Fever in the Ilkeston Registration Sub-district, by Dr. S. W. WHEATON.[1]—Ilkeston registration sub-district comprises the borough of Ilkeston, the Heanor Urban District, and the three rural parishes of Basford district. The population of the whole area was 31,455 in 1891, but the number of inhabitants has largely increased since that date owing to increased work at coal-mines, ironworks, and factories in the neighbourhood. Ilkeston and Heanor are essentially colliery towns: the former Dr. Wheaton contrasts favourably with other mining districts in regard to its situation, the open space about its dwellings, and the cleanliness of its streets, while the latter is in large measure a new town built in several ways advantageously for its working population. The whole registration sub-district has suffered from an excessive prevalence of enteric fever during past years, notably in the autumn months of 1897 and of 1898. Dr. Wheaton reviews the several sanitary conditions obtaining in Ilkeston and Heanor, in which during the last two years nearly all the attacks of enteric fever in the registration sub-district have occurred. There are many insanitary conditions common to both places which could be considered as conducing to the maintenance of endemic typhoid fever. In each town are privies and middens of objectionable type which occasion extensive fouling of soil near dwellings. Ilkeston has also a large number of wooden-pail closets, but in view of the way in which the "cleansing" of pails is reported to be performed these closets cannot present much sanitary advantage over midden privies. Yards in each town are usually unpaved, and accumulations of house-refuse are frequently met with in the corners of such yards, no receptacles having been provided. Dairies, cowsheds, and milkshops are often highly objectionable. In each instance isolation accommodation is inadequate and has been available for a small proportion only of the cases of enteric fever. At Ilkeston patients are admitted to hospital only upon payment of 3s. a day by their friends or by the guardians. In neither place is there any disinfecting apparatus. Both Ilkeston and Heanor are sewered, though the methods of sewage-disposal leave much to be desired. But notwithstanding their similar circumstances Dr. Wheaton does not attribute the endemic typhoid fever in the two places to the same cause. In Ilkeston grave suspicion fell upon the public water-supply of the district. This is a mixed supply, obtained partly by pumping from a disused coalpit and partly from the Nut Brook. The latter stream and its tributaries seem to be the common sewers of several villages and hamlets above the intake. Dr. Wheaton gives a detailed account of the several pollutions to which these small streams are exposed, stating in conclusion that "it is hardly possible to imagine a more dangerous and disgusting source of water." The filtration of the mixed water is clearly inadequate. There are two sand filters, each 241 square yards in area, which, to obtain a sufficiently slow rate of filtration, should hardly deal with more than 150,000 gallons a day, a figure clearly much below the actual consumption. The filters habitually work under as great a pressure as 11 feet. Dr. Wheaton points to the distribution of enteric fever in the town and to other circumstances which are consistent with this supply having been the agency by which fever was distributed. His conclusions in the matter are the more noteworthy as it appears that at no time during 1897 or 1898 was there any sudden outburst of fever such as we have been led generally to associate with water-borne contagion. It is unfortunate that at Ilkeston the materials available in the sanitary department for study of this question seem to have been in many respects meagre, even the notification returns being incomplete. It seems almost certain that pollution of the Nut Brook above the intake with infectious sewage from cases of enteric fever took place in each of these two years, and the relation between the character of filtration and the circumstance that Ilkeston suffered endemically, but not epidemically, forms an interesting subject for speculation. For the prevalence of fever at Heanor, the public water-supply of which is from deep wells apparently free from risk of pollution, Dr. Wheaton considers multifarious sanitary defects, making for wholesale soil-pollution, to be mainly responsible. It should be added, however, that both Heanor and Ilkeston seem to have encouraged fever in the other's district. Heanor workmen have contracted enteric fever in Ilkeston and infectious Heanor sewage has been discharged into waters flowing to the Ilkeston waterworks—a truly vicious circle.

[1] London, Eyre and Spottiswoode, East Harding-street; Edinburgh, John Menzies and Co.; Dublin, Hodges, Figgis, and Co. Price 3d.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6749 births and 4120 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had increased from 18·6 to 21·1 per 1000 in the three preceding weeks, declined again last week to 18·8. In London the rate was 18·6 per 1000, while it averaged 19·0 in the 32 provincial towns. The lowest death-rates in these towns were 11·3 in Derby, 11·8 in Brighton, 13·1 in Huddersfield, and 13·5 in Cardiff; the highest rates were 22·9 in Salford, 23·6 in Bristol, 24·1 in Wolverhampton, and 25·7 in Bolton. The 4120 deaths in these towns included 429 which were referred to the principal zymotic diseases, against 435, 456, and 489 in the three preceding weeks; of these 97 resulted from diphtheria, 94 from "fever" (principally enteric), 77 from measles, 74 from diarrhœa, 41 from whooping-cough, 40 from scarlet fever, and six from small-pox. No fatal cases of any of these diseases occurred last week in Plymouth, in Derby, or in Huddersfield; in the other towns they caused the lowest death-rates in Brighton, Cardiff, and Gateshead; and the highest rates in Leicester, Birkenhead, Bolton, Blackburn, Sheffield, and Hull. The greatest mortality from measles occurred in Birkenhead and Bolton; from scarlet fever in Bolton, Burnley, and Halifax; from whooping-cough in Salford; from "fever" in Wolverhampton, Leicester, Nottingham, Sheffield, and Birkenhead; and from diarrhœa in Blackburn. The 97 deaths from diphtheria included 38 in London, 15 in Sheffield, 10 in Leicester, six in West Ham, and six in Leeds. Six fatal cases of small-pox were registered last week in Hull, but not one in any other of the 33 large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Nov. 4th, was 3539, against 3217, 3408, and 3504 at the end of the three preceding weeks; 331 new cases were admitted during the week, against 455, 447, and 414 in the three preceding weeks. Influenza was certified as the primary cause of 19 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had increased from 133 to 477 in the seven preceding weeks, declined again to 418 last week, but were 55 above the corrected average. The causes of 41, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Manchester, Salford, Bradford, Newcastle, and in 12 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·3 and 17·9 per 1000 in the two preceding weeks, further rose to 18·8 during the week ending Nov. 4th, and corresponded exactly with the mean rate during the same period in the 33 large English towns. The rates in the

eight Scotch towns ranged from 14·2 in Paisley and 16·2 in Greenock to 19·4 in Dundee and 20·1 in Glasgow. The 573 deaths in these towns included 26 which were referred to measles, 26 to diarrhœa, 13 to "fever," 11 to scarlet fever, nine to diphtheria, and seven to whooping-cough. In all 92 deaths resulted from these principal zymotic diseases, against numbers decreasing from 225 to 59 in the eight preceding weeks. These 92 deaths were equal to an annual rate of 3·0 per 1000, which was 1·0 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 15, 13, and nine in the three preceding weeks, rose again to 26 last week and included 15 in Glasgow, four in Dundee, and three in Greenock. The deaths from diarrhœa, which had been 26 and 27 in the two preceding weeks, declined again last week to 26, of which 13 occurred in Glasgow, four in Edinburgh, three in Dundee, and three in Aberdeen. The deaths referred to different forms of "fever," which had been 13 and eight in the two preceding weeks, rose again to 13 last week, and included four in Glasgow, three in Aberdeen, two in Edinburgh, and two in Paisley. The fatal cases of scarlet fever, which had numbered six in each of the three preceding weeks, rose last week to 11, of which seven were recorded in Glasgow, and two in Edinburgh. The deaths from diphtheria, which had been three, four, and eight in the three preceding weeks, further increased to nine last week, and included three in Glasgow, three in Edinburgh, and two in Dundee. Of the seven fatal cases of whooping-cough three occurred in Edinburgh and two in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 84 and 108 in the two preceding weeks, further rose to 117 last week, but were nine below the number in the corresponding week of last year. The causes of 33, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 37·3 and 36·4 per 1000 in the two preceding weeks, further declined to 32·2 during the week ending Nov. 4th. During the past four weeks the death-rate in the city has averaged 34·9 per 1000, the rate during the same period being 19·1 in London and 17·6 in Edinburgh. The 216 deaths registered in Dublin during the week under notice showed a decline of 28 from the number in the preceding week, and included 51 which were referred to the principal zymotic diseases, against 68, 64, and 63 in the three preceding weeks; of these, 38 resulted from measles, six from diarrhœa, three from diphtheria, two from whooping-cough, two from "fever," and not one either from small-pox or scarlet fever. These 51 deaths were equal to an annual rate of 7·6 per 1000, the zymotic death-rate during the same period being 1·6 in London and 2·8 in Edinburgh. The deaths resulting from measles, which had been 52 and 44 in the two preceding weeks, further declined to 38 last week. The fatal cases of diarrhœa, which had been four and nine in the two preceding weeks, declined again last week to six. The three deaths from diphtheria and the two deaths from whooping-cough exceeded the numbers recorded in any recent week. The fatal cases of "fever," which had been four and seven in the two preceding weeks, declined again to two last week. The 216 deaths in Dublin last week included 46 of infants under one year of age and 40 of persons aged upwards of 60 years; the deaths of infants slightly exceeded the number in the preceding week, while those of elderly persons showed a decline. Six inquest cases and four deaths from violence were registered, and 65, or nearly a third, of the deaths occurred in public institutions. The causes of 13, or more than 6 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1899.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during October in each of the 43 sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 14·4 per 1000 of the population, estimated at 4,546,752 persons in the middle of this year. In the three preceding months the rates had been 9·8, 8·6, and 11·2 respectively. The rates were considerably below the average in Chelsea, St. George Hanover-square, St. Giles, Strand, St. Luke, and City of London; while they showed the largest excess in Fulham, Newington, St. Olave Southwark, Bermondsey, Rotherhithe, and Lewisham sanitary areas. One case of small-pox was notified in London during October, in Holborn sanitary area; but no small-pox patients were admitted into the Metropolitan Asylums Hospitals, and none remained under treatment at the end of the month. The prevalence of scarlet fever showed a further marked increase upon that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Hampstead, St. Olave Southwark, Greenwich, Lewisham, and Plumstead. The Metropolitan Asylums Hospitals contained 3406 scarlet fever patients at the end of October, against 2602, 2493, and 2836 at the end of the three preceding months; the weekly admissions averaged 426, against 293, 244, and 342 in the three preceding months. The prevalence of diphtheria showed a considerable increase upon that recorded in the preceding months; this disease was proportionally most prevalent in Fulham, Newington, Bermondsey, Rotherhithe, Camberwell, and Lewisham sanitary areas. There were 1687 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of October, against 1533, 1493, and 1479 at the end of the three preceding months; the weekly admissions averaged 258, against 229, 179, and 210 in the three preceding months. The prevalence of enteric fever in London was greatly in excess of that recorded in any month during recent years; among the various sanitary areas this disease showed the highest proportional prevalence in Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Poplar, Bermondsey, and Rotherhithe. The Metropolitan Asylums Hospitals contained 341 enteric fever patients at the end of October, against 131, 213, and 252 at the end of the three preceding months; the weekly admissions averaged 58, against 26, 37, and 41 in the three preceding months. Erysipelas was proportionally most prevalent in St. Martin-in-the-Fields, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, and Mile End Old Town sanitary areas. The 46 cases of puerperal fever included seven in Lambeth, and three in Islington, in Hackney, in Poplar, in Battersea, and in Greenwich sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Oct. 28th the deaths of 6457 persons belonging to London were registered, equal to an annual rate of 18·5 per 1000, against 17·2, 23·6, and 18·7 in the three preceding months. The lowest death-rates last month in the various sanitary areas were 10·1 in Hampstead, 13·3 in Stoke Newington, 13·9 in Wandsworth, 14·0 in St. George Hanover-square, 14·3 in Lee, and 14·7 in Paddington; the highest rates were 24·8 in St. Saviour Southwark and in Rotherhithe, 25·7 in Limehouse, 26·8 in St. Luke, 30·6 in St. George-in-the-East, and 33·2 in St. George Southwark. During the four weeks of October 634 deaths were referred to the principal zymotic diseases in London; of these, 101 resulted from measles, 36 from scarlet fever, 228 from diphtheria, 36 from whooping-cough, 90 from enteric fever, 143 from diarrhœa, and not one either from small-pox, from typhus, or from any ill-defined form of continued fever. These 634 deaths were equal to an annual rate of 1·8 per 1000, against 3·3, 6·5, and 3·4 in the three preceding months. No death from any of these diseases was recorded last month either in St. Martin-in-the-Fields or in the Strand sanitary areas; in the other sanitary areas they caused the lowest death-rates in Paddington, St. George Hanover-square, Hampstead, Stoke Newington, and Holborn; and the highest rates in Bethnal Green, St. George-in-the-East, St. George Southwark, St. Olave Southwark, Bermondsey, and Rotherhithe. The 101 deaths referred to measles were slightly above the average number in the corresponding periods of the 10 preceding years; this disease was proportionally most fatal in St. Giles, Bethnal-green, St. George-in-the-East, St. George Southwark, Bermondsey, and Rotherhithe sanitary areas. The 36 fatal cases of scarlet fever showed a decline of 51 from the corrected average number; this disease showed the

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1899.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1899.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,546,752	1	2247	1453	1	668	10	46	591	—	5017	14·4	—	101	36	228	36	—	90	—	143	634	1·8	6457	18·5	136
West Districts.																										
Paddington	128,794	—	44	14	—	18	—	—	12	—	88	8·9	—	—	—	2	—	—	—	—	—	2	0·2	145	14·7	69
Kensington	172,899	—	47	31	—	11	2	—	14	—	105	7·9	—	1	1	9	—	—	5	—	1	17	1·3	231	17·4	121
Hammersmith	108,785	—	40	17	—	28	—	2	10	—	97	11·6	—	—	2	2	—	—	2	—	3	9	1·1	126	15·1	140
Fulham	130,720	—	115	75	—	11	—	1	23	—	225	22·4	—	1	4	8	1	—	—	—	6	20	2·0	158	15·8	138
Chelsea	96,721	—	27	13	—	7	1	1	11	—	60	8·1	—	2	—	1	1	—	2	—	6	12	1·6	137	18·5	84
St. George Hanover-square	80,876	—	27	3	—	4	—	1	9	—	44	7·1	—	—	—	1	1	—	—	—	1	3	0·5	87	14·0	76
Westminster	52,117	—	20	9	—	3	—	—	5	—	37	9·3	—	1	—	—	—	—	3	—	1	5	1·3	82	20·5	142
St. James Westminster	21,827	—	3	5	—	3	—	—	3	—	14	8·4	—	—	—	1	1	—	—	—	1	3	1·8	35	20·9	368
North Districts.																										
Marylebone	140,139	—	57	31	—	14	—	—	22	—	124	11·5	—	1	1	9	1	—	4	—	2	18	1·7	176	16·4	110
Hampstead	80,252	—	57	18	—	4	—	1	5	—	85	13·8	—	—	2	2	—	—	—	—	1	5	0·8	62	10·1	89
St. Pancras	244,548	—	75	90	—	21	—	2	37	—	225	12·0	—	1	3	18	5	—	3	—	5	35	1·9	382	20·4	142
Islington	348,085	—	214	86	—	58	—	3	40	—	411	15·4	—	7	3	12	3	—	2	—	8	35	1·3	456	17·1	161
Stoke Newington	35,187	—	23	2	—	1	—	1	3	—	30	11·1	—	—	—	1	—	—	1	—	—	2	0·7	36	13·3	106
Hackney	222,571	—	147	53	—	50	1	3	36	—	290	17·0	—	—	2	4	—	—	7	—	5	18	1·1	253	14·8	142
Central Districts.																										
St. Giles	37,196	—	4	1	—	4	—	—	6	—	15	5·3	—	3	—	—	—	—	—	—	1	4	1·4	50	17·5	41
St. Martin-in-the-Fields	12,142	—	2	2	—	—	—	1	3	—	8	8·6	—	—	—	—	—	—	—	—	—	—	—	14	15·0	—
Strand	23,016	—	4	3	—	1	—	—	1	—	9	5·1	—	—	—	—	—	—	—	—	—	—	—	40	22·7	49
Holborn	29,621	1	9	1	—	6	2	—	3	—	22	9·7	—	—	—	—	—	—	—	—	1	1	0·4	43	18·9	107
Clerkenwell	66,068	—	35	15	—	9	—	2	6	—	67	13·2	—	—	2	3	2	—	4	—	4	15	3·0	122	24·1	183
St. Luke	40,868	—	9	9	—	4	—	—	3	—	25	8·0	—	1	1	1	1	—	1	—	2	7	2·2	84	26·8	129
City of London	27,996	—	5	2	—	5	1	—	1	—	14	6·5	—	—	—	2	—	—	1	—	—	3	1·4	45	21·0	50
East Districts.																										
Shoreditch	121,071	—	55	33	—	20	1	1	11	—	121	13·0	—	6	1	7	1	—	4	—	4	23	2·5	226	24·3	169
Bethnal Green	128,938	—	44	38	—	35	—	2	28	—	147	14·9	—	12	1	8	3	—	3	—	4	31	3·1	220	22·2	176
Whitechapel	81,391	—	30	19	1	37	—	1	16	—	104	16·7	—	3	1	6	—	—	1	—	2	13	2·1	130	20·8	142
St. George-in-the-East	48,560	—	10	10	—	20	—	—	12	—	52	14·0	—	6	—	2	1	—	1	—	3	13	3·5	114	30·6	190
Limehouse	56,807	—	28	12	—	30	—	1	11	—	82	18·2	—	—	—	2	1	—	5	—	3	11	2·4	116	25·7	178
Mile End Old Town	113,161	—	32	42	—	22	—	1	21	—	118	13·6	—	1	—	9	2	—	3	—	—	15	1·7	181	20·9	135
Poplar	170,606	—	60	52	—	45	—	3	23	—	183	14·0	—	3	1	12	4	—	6	—	7	33	2·6	268	20·5	139
South Districts.																										
St. Saviour Southwark	24,207	—	9	5	—	1	—	1	1	—	17	9·2	—	1	1	—	—	—	—	—	2	4	2·2	46	24·8	216
St. George Southwark	60,536	—	26	30	—	11	—	—	10	—	77	16·6	—	7	2	6	—	—	2	—	4	21	4·5	154	33·2	173
Newington	124,166	—	84	62	—	15	—	1	17	—	179	18·8	—	3	1	10	—	—	3	—	8	25	2·6	233	24·5	178
St. Olave Southwark	11,098	—	9	6	—	2	—	—	—	—	17	20·0	—	1	—	2	—	—	—	—	—	3	3·5	20	23·5	65
Bermondsey	85,835	—	43	65	—	22	1	1	12	—	144	21·9	—	6	1	9	—	—	4	—	4	24	3·6	157	23·8	143
Rotherhithe	41,050	—	16	30	—	13	—	—	6	—	65	20·6	—	4	1	5	—	—	2	—	1	13	4·1	78	24·8	172
Lambeth	308,108	—	167	134	—	31	—	7	36	—	375	15·9	—	3	—	21	2	—	5	—	11	42	1·8	447	18·9	110
Batterseа	174,996	—	94	31	—	34	—	3	21	—	183	13·6	—	8	1	5	2	—	8	—	4	28	2·1	204	15·2	114
Wandsworth	209,655	—	104	70	—	19	—	—	30	—	223	13·9	—	7	—	8	—	—	—	—	9	24	1·5	223	13·9	85
Camberwell	264,817	—	124	160	—	17	1	1	29	—	332	16·3	—	4	4	16	—	—	7	—	7	38	1·9	328	16·1	137
Greenwich	182,513	—	148	54	—	13	—	3	32	—	250	17·9	—	7	—	10	1	—	—	—	11	29	2·1	252	18·0	162
Lewisham (excluding Penge)	91,027	—	108	65	—	9	—	1	14	—	197	28·2	—	—	—	8	—	—	1	—	6	15	2·1	113	16·2	129
Woolwich	41,542	—	9	12	—	4	—	—	2	—	27	8·5	—	—	—	1	1	—	—	—	2	4	1·3	60	18·8	136
Lee	40,219	—	28	17	—	—	—	1	1	—	47	15·2	—	1	—	4	1	—	—	—	—	6	1·9	44	14·3	72
Plumstead	64,031	—	55	10	—	4	—	—	4	—	73	14·9	—	—	—	1	1	—	—	—	3	5	1·0	79	16·1	173
Port of London	—	—	—	6	—	2	—	—	1	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 26 cases of membranous croup.

† Including deaths from membranous croup.

highest proportional fatality in Fulham, Hampstead, Clerkenwell, St. Luke, St. George Southwark, and Rotherhithe sanitary areas. The 228 deaths from diphtheria were 19 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Mile End Old Town, St. George Southwark, St. Olave Southwark, Bermondsey, Rotherhithe, and Lee. The 36 fatal cases of whooping-cough were 46 below the corrected average number; this disease showed the highest proportional fatality in St. James Westminster, Clerkenwell, St. Luke, Bethnal Green, Woolwich, and Lee sanitary areas. The 90 deaths from enteric fever were 18 above the corrected average number; among the various sanitary areas this disease was proportionately most fatal in Westminster, Clerkenwell, Limehouse, Bermondsey, Rotherhithe, and Battersea. The 143 fatal cases of diarrhœa were 50 below the corrected average number; this disease showed the highest proportional fatality in Chelsea, St. George-in-the-East, St. George Southwark, Newington, and Lewisham sanitary areas. In conclusion, it may be stated that the aggregate mortality in London during October from these principal zymotic diseases was more than 14 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths of children under one year of age to births registered, was equal to 136 per 1000. No deaths of children under one year were registered in St. Martin-in-the-Fields. Among the other sanitary areas the lowest rates of infant mortality were recorded in Paddington, St. George Hanover-square, St. Giles, Strand, St. Olave Southwark, and Lee; and the highest rates in St. James Westminster, Clerkenwell, St. George-in-the-East, Limehouse, St. Saviour Southwark, and Newington.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced:—Surgeons: Gerald B. Brown to the *Cambrian:* John C. Ferguson to the *Bellona*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant G. E. F. Stammers assumes medical charge of the Royal Artillery and details, Marlborough Lines. Captain C. E. G. Stalkartt has joined at Woolwich. Major C. E. Nichol has taken over charge of the Station Hospital, Dover Castle. Surgeon-Lieutenant-Colonel F. H. Hensman, r.p., has arrived at Dover for duty. Captain H. D. Mason has embarked for service in South Africa. Lieutenant-Colonel F. G. Adye Curran (retired) has assumed medical charge of troops at Portobello. Lieutenant-Colonel A. L. Browne, r.p., has assumed medical charge at Warley. Major R. W. Ford is posted for temporary duty to Dublin. Captain J. E. Carter has embarked for service in South Africa.

Captain Alexander J. Chambers, from half-pay, to be Captain, with precedence next below R. H. Blackham, vice H. A. Bray, seconded.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Royal Warwickshire Regiment): Surgeon-Captain W. J. Pickup resigns his commission. 2nd Volunteer Battalion the Royal Sussex Regiment: Surgeon-Major (Brigade-Surgeon-Lieutenant-Colonel) W. M. Vores resigns his commission, with permission to retain his rank and to wear the uniform of the corps on his retirement, vacating at the same time his appointment as Senior Medical Officer to the Sussex Volunteer Infantry Brigade. 2nd Volunteer Battalion the Lincolnshire Regiment: Surgeon-Captain R. E. E. South resigns his commission.

THE NEW MAUSER REVOLVER.

According to Professor Bruno, who has examined the weapon and its effects from a surgical point of view, the new Mauser revolver is 11¼ inches long (nearly) and weighs about 41½ ounces avoirdupois. The length of the barrel, which shows four grooves, is almost exactly five and a half inches, while the diameter of its bore is 0·30 inch. The magazine holds 10 cartridges, each of which is 1·38 inches long and weighs 0·3745 ounce. The initial velocity is equal to 1394 feet per second, and after the projectile has travelled 1100 yards its speed is still about 377 feet per second. Professor Bruno experimented with deal and iron targets and also on a living horse and on human corpses; the distance he shot from varying between 10 and 300 metres. In testing the results advantage was taken of Professor Roentgen's discovery. The diameter of the orifices of entry and exit in the dead bodies varied between 0·2 and 0·275 inch, the aperture of exit being usually the wider of the two. The effect of the projectile on the long bones from distances between 20 and 200 metres was nearly similar to that produced by an infantry rifle from between 1000 and 2000 metres.

TRANSVAAL WAR NOTES.

Major Edward Wolfenden Gray, R.A.M.C., who entered the Army Medical Service in 1887 has been the first member of the Royal Army Medical Corps to fall at the call of duty in the Transvaal. Official reports state that he was killed in the action of Farquhar's Farm, near Ladysmith, on Oct. 30th, but no details have yet reached this country.

Mr. Frederick Treves, Surgeon in Ordinary to the Duke of York, consulting surgeon to the troops in South Africa, will leave Waterloo Station on Saturday next at 11.40 A.M. for the front. Before leaving London the Prince of Wales sent for Mr. Treves to say good-bye to him at Marlborough House. We understand that Adeline, Duchess of Bedford has placed a sum of money at Mr. Treves's disposal for use in the nursing of the wounded.

Correspondence.

"Audi alteram partem."

"THE MEDICAL SERVICE OF THE HEBRIDES."

To the Editors of THE LANCET.

SIRS,—Will you accept of my warmest thanks for your admirable leading article on the Medical Service of the Hebrides in THE LANCET of Nov. 4th? I have no doubt that it will greatly help on the good cause of the care and attention due to suffering humanity, which are surely equally due to those residing in a remote corner of the empire as they are to those so abundantly provided for in our great centres of wealth and population. May I venture to say something on this crying evil of neglect for the sick poor as it affects our North-western Highlands and islands from the point of view of a medical officer of health concerned with the vital interests of a population of the kind referred to, amounting to at least 40,000 souls?

The difficulties in ministering to the medical wants of such people are mainly two—viz., their scattered dwellings and the poverty of the inhabitants. It must be frankly allowed that when there is an absence of congestion the general health is as a rule good. But even the healthiest districts are liable to inroads of epidemics and in the poorer and more densely peopled townships such diseases as typhoid fever and even typhus fever may be described as truly endemic in their midst. I have said that the trouble in dealing with this question lies in the long distances to be travelled and in the poverty of the population. The latter is, of course, the more serious to overcome and, indeed, cannot possibly be met without help *ab extra*. To show how straitened are the circumstances of these people it will be sufficient to mention the case of one parish of over 4000 inhabitants where 1*d.* in the £ of rental is only sufficient to give a return of £16. Medical attendance at present is found by giving a salary of £100 (less or more) to each medical man under the guise of paying him for his services to the paupers—one-half of which has to be raised by rates, while the other half is contributed by the State from the annual grant in aid voted by Parliament for medical Poor-law relief. Under the old parochial boards this system worked fairly well. No doubt the pay was only a poor pittance, but it was enough to keep soul and body together for many a struggling medical man, and in a few cases to tempt younger and more enthusiastic men to spend in a healthy outdoor way a few pleasant years of the earlier part of their lives. Now with parish councils elected by what may be called universal suffrage the situation is changed and the public is shocked by such a tyrannical

and persecuting spirit as has been displayed in the outrageous case of Mr. Lamont—an outrage which will surely result in placing the medical man beyond the reach of being dismissed for reasons entirely independent of his doing his duty faithfully to the poor by securing him an appeal to the Local Government Board.

But I would venture to suggest another form of protection against arbitrary dismissal from local pique and local partisanship and, it may be, sectarian strife and religious rancour. In widespread counties, such as Inverness, Argyle, and Ross, it is absolutely necessary for the county medical officer of health to have provided for him local help. This help has, of course, to be paid for by the different districts into which these counties have been divided, and these district medical officers are, of course, appointed and salaried by the district committees who are the local authorities, one half or thereby of these salaries being contributed by Government under certain Acts of Parliament.

The remedy I have to offer is that these appointments should be carefully made, the holders properly remunerated by special grants, say, from the Scotch Congested District Board, and the holders be the servants of the district committee bursing the small allowances of which, and which alone (under the ordinary scale of payment for Poor-law attendances), the parish councils could claim to deprive their Poor-law medical officers. In other words, these men would become *officiers de santé*, as in France, be a part of the large army of sanitarians, and their duties would be directly to combat and if possible prevent, the entrance of disease in their respective parishes and jurisdictions.

In this way, besides the advantages to themselves, they would be the servants of the public at large and be much more directly under the ægis of the Scottish Local Government Board. Again, I would hope to see the day when every such officer should have the advantage of a cottage hospital, mainly for the segregation and treatment of infectious diseases, but also when not so employed available for the care and comfort of many surgical and other diseases which meanwhile are allowed to go to the bad for the want of nursing and convenient medical skill and attention. But this question of isolation hospitals in remote districts is one which I would like to dilate upon at greater length than I would myself care to inflict upon your readers at this time. On another occasion if you will allow me I shall have more to say, unless, indeed, THE LANCET in its large-heartedness, shown on many previous occasions, will issue a commission to inquire into the whole problem of medical help in the Highlands of Scotland.

I am, Sirs, yours faithfully,

Dingwall, Nov. 6th, 1899. WILLIAM BRUCE.

"THE PREVENTION OF ALCOHOLISM."

To the Editors of THE LANCET.

SIRS,—Mr. Vines says "Dr. Reid would saddle me with the task of confounding this thesis." He is unaccountably mistaken. I stated distinctly I had little expectation he would make the attempt and gave my reasons. It appears I was right. Moreover, I do not quite see what I am to gain by a controversy with Mr. Vines. The subject is an abstruse, scientific one, with which, as I had already surmised and as he now admits, he is not competent to deal. For the sake of argument, as I expressly stated, I conceded Mr. Vines's point and invited him to deal with my main thesis—"if artificial selection be impracticable then the only alternative is natural selection, in which case every scheme for the promotion of temperance which depends on the diminution or abolition of the alcoholic supply is in effect a scheme for the promotion of ultimate drunkenness." I anticipated his reply with a good deal of interest, for, as I said, I have had some past experience, which his refusal amusingly confirms. As I anticipated, he declines. He professes himself delighted with a concession purely verbal. At least he is easily satisfied. He thinks an essay which proves, beyond his powers of disproving, that the whole temperance policy is an enormous blunder which can lead to increased drunkenness only "was but to deliver a sermon barren of any result save the enlightenment of a benighted profession concerning a matter merely controversial," and in which, as he says, I was "pleased to deem the realm of practical politics of small account compared with the bogey of science for science' sake." Readers of my article will judge how gross is this queer misrepresentation if it be intentional, how wonderful the lack of comprehension if it be not. It would be interesting to learn what kind of essay has a human interest in Mr. Vines's opinion—one in which personal insinuations take the place of facts and arguments? He says that even had he the ability he has not the desire to controvert my main thesis and he professes himself content. For an ardent temperance reformer, boasting of common sense, he certainly is the most easily contented person I ever heard of. Surely it will be deemed significant if an attack on the whole temperance policy in the leading medical journal elicits no defence more serious than little insinuations of Mr. Vines, his strategic retreat, and his amazing satisfaction.

Once more, if artificial selection be impracticable then the only alternative is natural selection. In my opinion artificial selection is right and given an educated public it is practicable. It can be combined with temperance reform, for while safeguarding the species we may endeavour to reform the individual. But all this, dealing as it does with questions of ethics, of votes, and of education, is a mere opinion. It is not a question of science. If, however, opponents disagree and declare with Mr. Vines that artificial selection is neither right nor practicable, then if it is worth their while to deal with me at all they are on the horns of a dilemma. Either they must find the weak link in my argument or they must advocate unlimited drunkenness.

I am, Sirs, yours faithfully,

Southsea, Nov. 7th, 1899. G. ARCHDALL REID.

To the Editors of THE LANCET.

SIRS,—A paper by Dr. Archdall Reid in THE LANCET of Oct. 14th on the relation between alcoholism and heredity has given rise to some discussion both among medical men and in the temperance press. Dr. Reid's point of view is not that usually taken up by exponents of this subject. For him a parent's drunken habits carry with them no fear that his children will probably be thereby weakened against the temptation to like indulgence. Acquired characters impressed upon nerve or other cells by the habits of an individual, he tells us, are not proved to be transmissible. On the other hand, variations produced in the germ-cell prior to its intra-uterine development, such as family resemblance, for example, are transmitted. The habit of temperance he regards as merely an inborn peculiarity rather than a result of moral self-restraint and education.

Similarly the existence of a relatively temperate class or nation means for him a result of an evolution which in course of time has weeded out intemperate members from such a community. On this hypothesis he explains the comparative abstinence of some peoples and the still prevalent liability to excess among others. He admits, however, that there is such a thing as an inborn and transmissible capability of enjoying alcohol, but the taste of drink is necessary to develop this. He further allows that drinking tends to increase this capability, in some persons more, in others less. These admissions do not, however, appear to him sufficient to justify a belief in the transmissibility of the craving for drink. He consequently sees no occasion to attempt the restraint of drunkenness by the ordinary processes of temperance reform. He does not, indeed, propose to leave man entirely in the hands of nature and let him extinguish himself with his habits by unlimited indulgence. He would prefer to extirpate drunkenness by prohibiting and penalising reproduction among the intemperate. But reform he holds to be worse than useless and as tending only to perpetuate the evil by preserving a class of persons naturally prone to excess. Dr. Reid's observations, as I have stated, have not been allowed to pass unchallenged. Dr. Sims Woodhead compares his views to those of one who would encourage the extension of typhus fever (now nearly extinguished by preventive measures) in order to secure a costly immunity in accordance with the law of the survival of the fittest. Mr. Walter Edwards, writing in the *Temperance Record*, quotes the desire for knowledge in the children of educated parents as combating his views on heredity, and he further disputes his assertion that drunkenness is now least prevalent among the formerly drunken races. I must admit that in my opinion Dr. Reid's argument, though intricate and ingenious, appears to take too much for granted. The proofs of hereditary transmission have not perhaps been marshalled in this connexion with statistical accuracy. Nevertheless, what

evidence we have is strongly suggestive of their existence, while examples of transmitted aptitudes, which are undoubtedly acquirements as much as variations in the sense intended by Dr. Reid, are innumerable. Moreover, if, as he asserts, the "capacity for enjoying alcohol is inborn and transmissible," and this capacity is increased by exercise within "limits which vary immensely," there seems no just reason to doubt that a capacity so increased, it may be through successive generations, is transmissible in its augmented measure. As for the cure by evolution or that by Malthusian extirpation, they may be philosophical, but it can hardly be doubted that in no state of human society would either be found to be practicable. On the other hand, it is certainly begging the question to describe that reasonable self-denial which is the logical contrary of alcoholic indulgence as a "temperance fallacy."

I am, Sirs, yours faithfully,

Nov. 4th, 1899. B. G. MORISON.

"INFANT FOODS AND SCURVY RICKETS."

To the Editors of THE LANCET.

SIRS,—In a letter on this subject in THE LANCET of Nov. 4th (p. 1256) Dr. Ransom describes two striking cases of scurvy rickets caused by the use of a certain "infant's food." With his subsequent remarks on the dangers of these foods I think all who have studied the subject will be in agreement, but his final paragraph appears to undo the good effect which his previous sentences might have produced. In it he expresses a desire that the makers of these foods "should add to their value and diminish their danger by issuing with their tins a caution as to the need for the addition of some fresh food substance to the dietary." This would seem to imply that if a notice to the above effect is attached then the food may be used as a safe diet for infants. A glance at the advertisement columns of THE LANCET will show that a notice of this nature had already been issued by the makers.

But, Sirs, I do not think that this meets the case. In connexion with the sale of poisons the law insists that a printed notice must be affixed as to their poisonous nature. In the case of infant foods Dr. Ransom would suggest, not that their harmful nature should be stated, but that a notice should be attached describing the antidote which must be taken to prevent any ill-effects. Experience has shown that such a notice, which would of course appear in small type, would seldom be read and probably never acted on. Even if it were acted on it is open to grave question whether the result would be satisfactory; and I observe that Dr. Ransom's own practice in the cases which he records is not to continue the patent food with the addition of the antidote but to change the diet entirely to one of fresh milk, &c. On the principle that prevention is better than cure, and in the present state of our knowledge, the only safe course to pursue seems to be to abolish these foods entirely from the dietary of young infants except under medical advice. The uses and limitations of these patent infant foods have been well described in a recent annotation in THE LANCET,[1] which probably also expresses Dr. Ransom's own views on the subject, but his remark quoted above appears capable of an interpretation which might lead to unfortunate results.

I am, Sirs, yours faithfully,

G. A. SUTHERLAND.

Old Cavendish-street, W., Nov. 6th, 1899.

To the Editors of THE LANCET.

SIRS,—In reference to my letter on this subject in THE LANCET of Nov. 4th Messrs. Allen and Hanburys have written to me to point out that their more recent advertisements do contain a caution against the prolonged *exclusive* use of their preparations without the addition of some fresh food substance. I am very glad to find that this is so and to acknowledge the desire of the firm to supply a sound article. The object of my letter was not to specially criticise the "Allenburys" foods, but to emphasise the lesson taught by MM. Guinon and Le Guelland in the paper mentioned in an annotation in THE LANCET of Oct. 28th that the prolonged use of even the most (chemically) perfect foods which have been subjected to thorough sterilisation, is attended with the risk of scurvy rickets. Whether it be "maternised milk" or "infants' food" the purchaser ought to find on the bottle or tin full instructions as to how to avoid this danger.

I am, Sirs, yours faithfully,

Nottingham, Nov. 6th, 1899. W. B. RANSOM.

[1] THE LANCET, Oct. 28th, 1899, p. 1181.

VACCINATION STATISTICS: A QUESTION OF ARITHMETIC.

To the Editors of THE LANCET.

SIRS,—You are aware, and are doubtless proud to be aware, that THE LANCET is read not only by the medical profession but by a large number of educated laymen. Also, that in the present day there are constantly arising among the subjects of treatment in THE LANCET questions of political and statistical importance on which the views of laymen may be competently expressed and may fairly be accorded a respectful reception in your columns. There is an impression, however, among some of my friends that if I, a layman, desire, however respectfully, to place before you, for the candid consideration of the profession, a fair criticism of certain medical statistics your columns will not be opened to me—that you will deem the tendency of my criticism to be mischievous the moment you discover that it relates to small-pox and vaccination. I take leave to doubt this and I write to you boldly in the confidence that you will treat this communication on its merits and without regard to the question whether or not it seems to weaken one of the arguments for vaccination. If it does, all the more reason for its careful consideration; if not, it can be promptly disposed of and no harm done. I make my appeal for a hearing first to the scientific instincts of your profession and secondly to their chivalrous instincts. The appeal to their chivalry is based on the fact that the law of compulsory vaccination is upheld entirely by medical sanction—a fact which places medical men under a special obligation to hold their minds open to any criticism. The appeal to the scientific spirit I need not defend. No true man of science contests the duty of submitting his conclusions to the test of criticism.

I am desirous to illustrate a fallacy in the medical statistics of vaccination by reference to Dr. Coupland's report to the Royal Commission on the Gloucester epidemic (Appendix VII. to the Final Report). Dr. Coupland's statistics with regard to certain invaded houses deal with a community of 4861 persons exposed to infection, of whom 1717 were attacked with small-pox. This is an attack-rate of nearly 35½ per cent. But subdividing this community into (1) those vaccinated, (2) those undergoing vaccination "just before or during the invasion of their homes by small-pox," and (3) those not vaccinated, Dr. Coupland arrives at the conclusion that "the attack-rates are inversely to the proportionate numbers exposed to infection, being as much lower amongst the vaccinated as they are higher amongst the unvaccinated." He made the discovery of these "singular results" in the course of an analysis of the cases in four groups, an analysis undertaken for the purpose of determining the effect of hospital isolation in limiting the spread of the disease, and I am obliged to correct his totals because they are derived by taking the mean of his four percentages. You cannot, of course, get correct averages of percentages in this way. You must go back to the figures on which your percentages are based, sum them up, and take fresh percentages. According to this reckoning Dr. Coupland's point is represented by the following figures:—

	Per cent.		Per cent.
Vaccinated community ...	... 69·6	Attack-rate ...	... 30·3
Unvaccinated ,, ...	... 16·9	,, ,, ...	... 73·4

This undoubtedly is a very impressive demonstration. What I want to ask is whether it is scientific.

It will be observed that about 13½ per cent. of the community under consideration are not at present accounted for. This 13½ per cent. is represented by the proportion of the community treated as "undergoing vaccination," and, curiously enough, their attack-rate was nearly equivalent to their proportion of the community: it was 13 per cent. From that fact I start my criticism. Assuming 14 days to be the period that must elapse before those "undergoing vaccination" can be passed into the vaccinated class we have it here established that for the purposes of these statistics the community suffering at the very small attack-rate of 13 per cent. have been withdrawn within a fortnight

from a portion of the community not much larger than itself. It is not contended that the fact of this 13½ per cent. getting vaccinated was the cause of their small attack-rate—a rate under half of that of the fully vaccinated community. They are kept in a separate class because the fact of their taking small-pox at all so quickly after vaccination is supposed to prove that the attack was already on them when the vaccination took place. But see the effect their transference has upon the class from which they are taken. Their actual numbers were 653 and 85 of them caught small-pox when they were in the unvaccinated class. The result will be best seen in the actual figures:—

From	... ...	1475	of whom	689	attacked
Take	... ...	653	,,	85	,,
Result	... ...	822	,,	604	,,

As Dr. Coupland admits in another demonstration, "deducting those 'under vaccination' causes an increase in the 'unvaccinated' rates." In the above illustration the increase caused by this deduction is as much as 27 per cent. The unvaccinated attack-rate is increased from 46 to 73 per cent. by the transference of these cases.

Now what is forgotten in the preparation of all these statistics is that during an epidemic like that of Gloucester this transference is going on constantly. The Gloucester epidemic lasted about 400 days and it appears from Dr. Coupland's report that from Jan. 1st to July 11th, 1896, there were no fewer than 34,836 vaccinations in a population of about 41,000. A few days more and the 653 undergoing vaccination *minus* the 85 who caught the small-pox—that is to say, 568—would have passed into the vaccinated community in these invaded houses. A vaccinated community of 3386 would then have become 3954 and its attack-rate by that addition would be reduced from 30 per cent. to 26. My argument is this. Whatever value you attach to vaccination, it is certain that not *all* the unvaccinated will take small-pox. Some even of the unvaccinated will be insusceptible. Take the liability to attack among the unvaccinated if you like at the above quoted ridiculous rate of 73. Even then you must admit that in vaccinating the survivors you are robbing the unvaccinated side of the account of 27 persons and when you have taken them you not only reduce the percentage of the vaccinated attack-rate, but you heighten the unvaccinated attack-rate. It cannot fail to be clear to the most uninitiated in figures that there is a purely arithmetical advantage here given to the vaccinated and that no scientific inquirer can come to any conclusion without allowing for the arithmetical factor.

The fallacy occurs in all epidemic statistics. It is never remembered that the vaccinated is a constantly increasing factor and that the unvaccinated is as constantly diminishing. What practically takes place is that you vaccinate the whole population in the face of an epidemic. But if you vaccinate nearly the whole population you of course diminish the attack-rate enormously as compared with what it must be in the unvaccinated remnant. This was illustrated in Middlesbrough where 98 per cent. of the population was vaccinated. You then got among the vaccinated a rate such as you might expect when it is calculated over almost a whole population. The remnant—2 per cent.—includes, of course, all who in that great population were medically unfit for vaccination. Those who in that remnant caught the small-pox naturally made a higher and higher percentage as their neighbours were rushed into the vaccinated class.

These are only some of the observations which the statistics appealed to in support of compulsion suggest to me; but I must not presume too much on your patience at a first attempt to gain your ear and that of the medical profession.

I am, Sirs, yours faithfully,

ALEX. PAUL,

Author of "A Royal Commission's Arithmetic."

*** We wish to thank Mr. Paul for believing that our columns would be open to his communication and at the same time would point out that THE LANCET is a strictly medical journal. Is Mr. Paul quite certain of his facts? He does not seem to appreciate that the statistics he criticises were based on the vaccinal condition of the inmates of houses which had been invaded by small-pox and were strictly confined to the period during which those persons were exposed to the liability of direct infection. It is quite true that if the collation of such figures had been postponed to the close of the epidemic the relative proportions of the vaccinated and unvaccinated in the community would have been very different from what they were whilst the disease was spreading, and to our mind it does point to a very marked effect of vaccination that the incidence rate upon those who at the time of exposure were undergoing vaccination should have been so much lower than that upon those who had been vaccinated some time previously, most of them only in their infancy. We do not well see how the problem to be solved—namely, what influence, if any, does vaccination exert in protection from variolous infection—could have been more clearly attacked than by ranging the community exposed to small-pox under the heads given in the report. However, Mr. Paul will find in its pages material for testing the point independently, for he has only to analyse the table given on p. 156 *et seq.* to determine the respective incidence of small-pox upon each vaccinal class according to the proportionate numbers exposed. Thus he could divide the whole community into three sections—namely: (1) those in which every member of the infected household had been vaccinated (in infancy or later) at the time at which small-pox attacked the house; (2) those in which some of the members had never been vaccinated and who remained unvaccinated throughout the period of exposure to infection; and (3) those in which some (or all) of those who had not previously been vaccinated were vaccinated at the time of the invasion of the house by small-pox or (as more often was the case) were vaccinated upon the appearance of the disease within the family and who were therefore "undergoing vaccination" when themselves attacked by small-pox.—ED. L.

THE FORCIBLE STRAIGHTENING OF CARIOUS SPINES.

To the Editors of THE LANCET.

SIRS,—Two years ago this month a discussion was started at the Clinical Society of London upon the propriety of forcibly straightening spines which had been left deformed by Pott's disease, 42 cases being then reported by English surgeons. The Clinical Society itself expressed neither approval nor disapproval of the method, but in response to the President the two gentlemen who introduced the subject "cordially accepted the suggestion to show cases when sufficient time had elapsed."[1] I am sure that the profession would be still further indebted to the Clinical Society if the President now called upon those gentlemen to bring forward a precise clinical account of each individual case which was referred to on that occasion. And if by chance it should be inconvenient for any one of those surgeons then to attend personally, a request might be made for a report in writing of each case which could be read to the meeting. There are, I am sure, many surgeons beside myself who are anxious to know to what extent the improvement spoken of in those cases has been maintained.

I am, Sirs, yours faithfully,

EDMUND OWEN.

Great Cumberland-place, W., Nov. 7th, 1899.

"THE EXPENSES OF A MEDICAL MAN'S MOTOR-CAR."

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Oct. 28th, at page 1193, a letter from Mr. Harry Lupton in which he gives his experience of his car—a well-known one—and incidentally appears to throw doubt on my account. To begin with, there is no doubt that the "International" is a simple and well-finished car and worth the rather higher price. Any cheap machinery (including motors and bicycles) is a delusion and a snare. I have had very little serious trouble with my car because it is well finished. In the same way

[1] THE LANCET, Dec. 4th, 1897, p. 1456.

my Rover bicycle has run 4000 and odd miles and has not cost a penny for repairs.

I do not agree with all of Mr. Lupton's summaries—e.g., (1) this is partly true; (2) there is now a cycle repair place in most towns; (3) certainly it is of no use having a motor unless one is fond of machinery, and can manage small engineering matters—similarly no man should keep a bicycle unless he can repair a puncture and use a spanner; (4) this is quite unnecessary, a bicycle is advisable; (5) is absurd (I have been many miles from home and from a railway station; in September I went with a friend on a 170 miles tour to Chichester, Arundel, Worthing, Brighton, Horsham, Dorking, and home without a hitch); (6) I have four secondary batteries and when one pair is exhausted I send it to London to be charged; (7) quite so, no trouble at all; (8) I question whether the car would be slower than horse traction. One can go down a hill in a motor-car at any speed

With regard to the list of "outside helps," I think that most automobilists do all these repairs themselves. I know several and we rather pride ourselves on doing these little engineering exercises "on our own." At some time or other I have had most of these troubles, but have set them right myself except the "organic" ones, such as water-tube broken, insulator, &c., which have not occurred. Of course, it is obvious that if one had an engineer in to adjust chains, re-packing, &c., the expenses would very soon run up, just as with a bicycle and its slight repairs and adjustments. It must be remembered that if one has horses one employs trained and skilled (?) men who are accustomed to the vagaries of the animals, but very few automobilists go to the expense (25*s.* per week) of a motor driver. Many men drive a motor themselves with no previous experience or knowledge of, or liking for, machinery and are disappointed with the results.

Personally I hate horses and all my life have been interested in and have dabbled in machinery, and I have found my experiences of engine-rooms more or less useful in "diagnosing and treating" the functional disorders of my car's internal arrangements. As Mr. Lupton says, the car wants looking after, of course; so do horses or a bicycle. But I confess that I enjoy seeing to my car and I have spent many happy hours on my back underneath it. I have just done a day's round of over 30 miles easily, in wet and mud, and the car was quite fit to go out on the next day as early as usual. What would one or two horses be like, to say nothing of the man? For a man who only needs one horse a motor-car would be of no advantage, but where two or three horses are needed a good motor-car is, in my opinion, infinitely better and more economical. My car does more than two horses could do and does it more easily.

I am, Sirs, yours faithfully,

Nov. 7th, 1899. A. CHARPENTIER.

STUDY LEAVE FOR COLONIAL MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Since the question of study leave has at length begun to receive the attention which it has long deserved may I be allowed, as a member of a service not usually included under the heading of "The Services," to bring forward a few points bearing on the importance of regular study leave amongst a large body of medical men, some working in colonies and some in protected States and generally known as the Colonial Medical Service? Contrasting as one must the value to the empire of the lives entrusted to our care from time to time as medical officers with the value of the life of the soldier in the ranks, without desiring in the slightest degree to detract from the debt which we all owe to our gallant "Tommy Atkins," no one can deny that the civil medical officer has at times the fate of a district, a State, or even a whole settlement, depending in very great measure on his skill and training. Writing, as I feel it my duty now to do since this matter has not evoked the interest of those of my seniors in the profession and in this service, practically 8000 miles from specialism and the facilities of learning, forgetting with the ardent help of a tropical sun and humid atmosphere the anatomy, physiology, and pathology of our "lecture days," ignorant of, or seeing darkly through, the papers, new surgery, medicine, midwifery, bacteriology, and therapeutics, one cannot but acknowledge that after six years of a district surgeon's life in the East neither his faculties nor his knowledge are in a condition to be of the utmost possible benefit to his patients. Then, again, incomplete establishments, an exceedingly heavy fare, small salaries compared with other branches of the civil services and local companies, heavy expenses of living and departmental economy, leave regulations, and the time lost in the voyage (24 days), all tend to prevent, and in point of fact do prevent, the spending of vacation leave—some cases even of long leave—in the pursuit of knowledge and the renewing of past facts. I would therefore beg to impress upon, or rather to remind, the powerful ones in our profession at home that the Colonial Medical Service should not be forgotten in any discussion regarding such a vital necessity as study leave, and, furthermore, of the fact that we now have at the head of our colonial affairs a broad-minded and sympathetic Secretary of State.

I am, Sirs, yours faithfully,

P. N. GERRARD, M.D. Dub.,

Oct. 6th, 1899. District Surgeon, Vlu Selangor, F.M.S.

"THE INFECTIOUS DISEASES (NOTIFICATION) EXTENSION ACT."

To the Editors of THE LANCET.

SIRS,—Please accept my best thanks for your further information in THE LANCET of Nov. 4th respecting the greater efficiency of the Infectious Diseases (Notification) Extension Act over the Huddersfield Notification Clauses, and I am bound to admit that in the respect you mention the efficiency of the general Act is greater than the local Act, but in practice it does not appear, as the medical men notify us of every case, whether or no it arises during the 30 days or not, and we act upon, and pay for, such notification accordingly. Undoubtedly this is not quite in accordance with the strict letter of our Act but this is the principle that is adopted and therefore our practice in this respect is the same as that of the general Act.

I am, Sirs, yours faithfully,

Health Office, Huddersfield, Nov. 4th, 1899. E. G. ANNIS.

ECTOPIC GESTATION.

To the Editors of THE LANCET.

SIRS,—I hope it will not be out of place if I trouble you with an explanation of the meaning and uses of the term "ectopic." I observe that its exact and full meaning is often misunderstood. Thus, in the Sydenham Society's Lexicon: "Ectopic gestation is Barnes's term for extra-uterine gestation"; also I find in Ribemont-Dessaigne's work, 1894: "Gestation extra-utérine, dite encore gestation ectopique." The like error recurs in almost all recent references to extra-uterine gestation. The full meaning of a word is often the condensed expression of a series of facts culminating in a scientific theory. This applies to the word ectopic. Thus, in my work, "On the Diseases of Women, 1878," I first adopted the term "ectopic" as more accurate and comprehensive than the old term "extra-uterine," pointing out that "some gestations, as those taking place in the lower segment, and in the cervical canal of the uterus, and in the wall of the uterus, are abnormal and ectopic, but are not strictly extra-uterine."

The term is closely linked with the new theory of placenta prævia which I first sketched in 1847 (THE LANCET), and which I demonstrated in my Lettsomian lectures before the Medical Society of London in 1857[1] and in many subsequent memoirs and works by abundant physiological and clinical evidence. I described the division of the uterus into three zones: (1) the upper or fundal zone, the normal and safest seat of gestation; (2) the middle or equatorial zone, also a seat of gestation and comparatively safe; and (3) the lower zone, the seat of dangerous "ectopic" gestation. I defined the division of the upper from the middle zone by a line—the upper polar circle. The equatorial zone is divided from the lower zone by the lower polar circle—i.e., by "Barnes's boundary-line." My discovery of the line of demarcation between the lower zone and the equatorial zone was the outcome of extensive clinical work. The subsequent recognition of this line by Bandl and other disciples of the German school was no doubt suggested by my work, and confirmed by the study of a few frozen sections of women

[1] In the library of the society is a drawing showing this description of the uterus.

who died under placenta prævia. Not at all disposed to undervalue the importance of the post-mortem investigations, confirming, as they do, my original description, I may be permitted to observe that the evidence of what may be called "frozen physiology" cannot be compared with the rich evidence of "living physiology" and clinical experience. Let me conclude this brief explanation of the true significance of the term "ectopic gestation" with a challenge to those who, directly or indirectly, have passed over my claim to originality to make good their conduct. "*Litera scripta manet.*" The following dates have to be considered: How does "*Barnes's boundary-line*" described in 1847, 1857, and repeatedly since, become the "*os internum*" of Braune in 1872, Bandl's *ring* in 1876, and later still the *contraction-ring* of Schroeder?

I am, Sirs, yours faithfully,

Eastbourne, Nov. 6th, 1899. ROBERT BARNES.

THE NOTIFICATION OF PULMONARY TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—I should be grateful if you would kindy insert the following letter which I have sent to all the medical practitioners in Norwich.

I am, Sirs, yours faithfully,

H. COOPER PATTIN,
Medical Officer of Health.

City of Norwich Municipal Buildings, Nov. 6th, 1899.

SIR,—At my suggestion the Health Committee of the City Council has agreed to make a six months' experiment, for State medical purposes, of the value of a voluntary notification of phthisis. It is believed that the information which will thus be gained will furnish a reliable basis upon which to estimate the amount and distribution of the lung form of tuberculous disease which prevails in Norwich, and as the Health Committee is advised by me that the information it may look forward to acquiring through the voluntary notification of the disease will be of value to it as well as to the medical profession and to preventive medicine it has on its part, as the local public health authority, agreed to pay 1*s.* for each notification certified to have been received by me. In view of the importance of this experiment I do most sincerely hope that it will meet with your cordial concurrence and active support. It is proposed to commence the voluntary notification of phthisis in Norwich on Jan. 1st next. At the end of four months I have to report to the Health Committee upon its actual and prospective value as an aid to State medicine, and if it meet, as I fully expect it to meet, with cordial acceptance at the hands of the medical profession in Norwich I do not doubt that I shall be able to advise the Health Committee of the City Council to continue it in operation for a very much longer time than six months—probably until a general Act of Parliament include the tuberculous among the compulsorily notified diseases. I propose on the receipt of a notification of phthisis to visit the indicated dwelling in person to satisfy myself as to the existence of overcrowding or other remediable sanitary defect. Members of the medical profession may rest assured that nothing will be done to disturb the relation between the certifying practitioner and the patient—a small, clearly-printed card, with simple directions as to the treatment of expectoration, provision of ventilation, &c., only being left. I shall be glad if on and after Jan. 1st next you will notify to me any case of phthisis under your actual treatment, particularly if you have reason to regard the dwelling and home surroundings as factors of importance. Please make use of the ordinary notification forms.—Yours truly,

H. COOPER PATTIN,
Medical Officer of Health.

City of Norwich Municipal Buildings, November, 1899.

"THE USE OF MERCURY IN THE TREATMENT OF HEART DISEASE."

To the Editors of THE LANCET.

SIRS,—Having read Dr Alexander Morison's address on the Use of Mercury in the Treatment of Heart Disease[1] with great interest, I think it might interest your readers to know that calomel has frequently been used as a diuretic in continental clinics. When studying under Professor von Ziemssen (Munich) in the "eighties" I saw the remedy continually employed in his wards and the professor never missed an opportunity to recommend it to his students. The remedy is also highly lauded by Jendrassik[2] and by Bauer[3] in his article, "Treatment of the Circulatory Disorders." Bauer says that calomel often produces a regular "flood" of urine, not seldom amounting to five, and even to 10, litres during 24 hours. The good effect is even produced in cases in which digitalis has been useless and the increased diuresis generally lasts for some time after the last dose of calomel has been taken. The use of calomel, however, is not without danger as bad effects are always observed in those cases in which the diuresis is not increased by the remedy. Salivation, stomatitis, and diarrhœa, not seldom of a sanguineous type, may occur and shorten the life of the patient, especially in cases in which the heart disease is complicated with nephritis or in cases of extreme degeneration of the myocardium. Calomel should be given in doses of three grains combined with one-sixth of a grain of opium (to prevent diarrhœa) three times daily for at least three days, but it may be pushed for five, and even for 10, days. The good effects will seldom be observed before the third day. Should diarrhœa or salivation occur the remedy must be stopped immediately; in any case the mouth should be watched from the beginning of the treatment and a gargle of potassium chlorate used regularly. After the disappearance of the œdema a course of digitalis or strophanthus will often be useful to prevent its re-collection, later on the calomel treatment may be repeated if necessary. I may add that I have in many cases followed this course of treatment with excellent results, and I am convinced that it will do good sometimes in cases which have not reacted on digitalis, diuretin, and other remedies in general use.

I am, Sirs, yours faithfully,

Finsbury-square, Nov. 6th, 1899. J. P. ZUM BUSCH.

[1] THE LANCET, Oct. 28th, page 1147.

THE RAY FUNGUS AND THE ANIMAL WORLD: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In your report of my remarks at the last meeting of the Clinical Society of London I am made to say that I thought it doubtful "whether the true ray fungus of animals was ever really found in man." I did not say this, but expressed a doubt as to whether it was ever found except in the animal world and asked if there was any real evidence of its conveyance from vegetables to animals.

I am, Sirs, yours faithfully,

Half Moon-street, Piccadilly, Nov. 6th, 1899. G. R. TURNER.

"THE ORGANISATION OF THE PROFESSION."

To the Editors of THE LANCET.

SIRS,—The list of "medical unions, guilds, and kindred associations" published in THE LANCET of Oct. 21st presents an extraordinary omission. While it recounts the local medical union of every little provincial town in England and even mentions the Cork Medical Protection Association, it entirely ignores the Irish Medical Association. This organisation has been doing the work of the profession in Ireland for over 60 years and its members are more numerous than those of a score of the local English guilds and far more numerous than those of all the other medico-ethical associations in Ireland put together.

As, however, it shares with the British Medical Association the cold shade in which it is placed by this list it need not complain. I am, Sirs, yours faithfully,

ARCHIBALD HAMILTON JACOB, M.D. Dub., F.R.C.S. Irel.,
Councillor and ex-President of the Irish Medical Association.

Dublin, Nov. 3rd, 1899.

*** The Irish Medical Association ignored our invitation to communicate particulars concerning itself.—ED. L.

To the Editors of THE LANCET.

SIRS,—I should like to make a few observations on the report of your Special Commissioner in THE LANCET of

[2] Deutsches Archiv für Klinische Medicin, vol. xxxviii.
[3] Handbuch der Therapie innerer Krankheiten, second edition, vol. iii.

Oct. 28th. To commence with, I may say that my views are the outcome of an experience of 25 years in practices, my father's and my own, which have relied on club work for a certain portion of their receipts. My father's practice, of from £1200 to £1300 per annum, had an annual income from various clubs of £350, and my own has an income of £200 from like sources. I think it is patent that clubs must continue to exist; the working-man is bound to see the advantage to himself of an insurance against sickness. The difficulty that always has arisen is the question of the wage-limit. The club member used to pay 5*s.* per annum; he now pays 4*s.* per annum—"one penny a week." I am speaking of the usual rates existing in all large towns, more especially London. What does 4*s.* per annum mean to the medical officer of a club? My experience tells me—my books show it—that when the visits at the patient's house and the attendances at the practitioner's surgery are totted up, even in the worst years when influenza was extremely rife, the amount paid per outside visit works out at 3*s.*, and for each attendance at surgery at 2*s.* In healthy years it may rise as high as 4*s.* and 3*s.*

Now, the average practitioner's fee for private work in London suburbs is 3*s.* 6*d.* per visit and 2*s.* 6*d.* for attendance at surgery, a sum including medicine, &c., if required (we may balance the occasional 5*s.* and 7*s.* visits against the 2*s.* 6*d.* visits). A certain variable proportion of the private work results in bad debts—say, 20 per cent. I come to the conclusion, then, that attendance on *male* club members (I have no experience of women's or children's clubs), is as remunerative as private work at an average fee of 3*s.* 6*d.* per visit. I also think that there is no necessity to worry about wage-limits, because the private patients who would pay a higher fee than 3*s.* 6*d.*, are quite unlikely to join clubs for medical attendance' sake.

In my opinion the possession of clubs is of as great advantage to the practitioner as the possession of a hospital appointment is to an operating surgeon. It gives him a certain amount of material to prevent him from rusting if private work is not coming in, and so long as it is not unremunerative there is no reason for giving it up. The club system as it has existed for years (to be distinguished from the system adopted by the medical aid societies) appears to be much more likely to be remunerative and to work easily than the complicated system of *minimum* fees (which probably soon become the *ordinary* fees) adopted by the Ashton Medical Society. The society's system appears particularly vicious in the fact that it divorces "advice" from "medicine," the really valuable "advice" being priced at 1*s.*, whilst the frequently valueless "medicine" is labeled 2*s.* and 2*s.* 6*d.* I have read this scale of fees two or three times and it appears so incomprehensible that I wonder whether there may not be a printer's error somewhere. The old system, where the medical officer charged a definite fee per visit, irrespectively of the fact whether he sent medicine or used dressings, is one not to be forsaken without considerable thought.

Another point is the 15*s.* midwifery fee. The medical man, if he would feel safe with regard to his patient, attends for a varying period, usually in the night hours, and makes, say, six other visits during the ten days after a confinement. He is not paid remuneratively unless he charges 1½ guineas, working out at 10*s.* 6*d.* for his night visit and six 3*s.* 6*d.* visits afterwards. Of course I am quite aware that a guinea midwifery fee has been a common one for years among the poorer classes, but among medical men whom I have met I have always heard the opinion expressed that it in itself was unremunerative and was only tolerated because it led to further practice among the families thus brought under the medical man's control. Then vaccinations at 1*s.* 6*d.*! The occasional vaccinations of the majority of private practitioners until lately have been made with calf lymph obtained from various private firms. The price of a small tube with the postage comes within two or three pence of the fee suggested. Against the half-guinea anæsthetic fee I may perhaps be allowed to state a fact within my own knowledge. Some years ago I suggested to the secretaries of the clubs which I am associated with that in certain (usually emergency) cases it would be advantageous to have the assistance of another medical man—e.g., to give an anæsthetic when setting a fracture—and that their medical officer should be empowered to obtain that assistance if he required it. The various committees agreed at once and authorised a fee not exceeding 2 guineas, the understanding being that the ordinary fee would be 1 guinea.

These points I would emphasise, simply because the members of the Ashton Medical Society, who are alarmed at the idea of "clubs being introduced into the district," are fixing a scale of fees (call them minimum if you will), which scale is *decidedly lower* than the usual self-respecting club member is accustomed to pay. The gnat and the camel with a vengeance.—I am, Sirs, yours faithfully,

Nov. 7th, 1899. PRACTITIONER.

THE MANCHESTER AND SALFORD PROVIDENT DISPENSARIES AND MR. G. H. BROADBENT.

To the Editors of THE LANCET.

SIRS,—Whilst thanking you for the correction in THE LANCET of Nov. 4th, page 1250, I shall be greatly obliged if you will allow me to state that I am not in any way connected with the Manchester and Salford Provident Dispensaries. I am, Sirs, yours faithfully,

Manchester, Nov. 6th, 1899. G. H. BROADBENT.

"INTRA-PERITONEAL HÆMATOCELE: THE OLDER AND NEWER STATISTICS CONTRASTED."

To the Editors of THE LANCET.

SIRS,—I must thank Mr. Taylor for his kind reply in THE LANCET of Nov. 4th to my criticism of his statement as to the rate of mortality of cases of extra-uterine gestation; at the same time I do not think that his answer really meets the question. I am quite prepared to admit that mistakes were, and are, frequently made in the diagnosis of cases of hæmatocele. Intra-peritoneal effusions of blood were, no doubt, often diagnosed when the condition was one of pelvic inflammation, but, on the other hand, pelvic inflammations were no doubt equally often diagnosed when the condition was really one of hæmatocele. There are no good grounds for supposing that cases of extra-uterine gestation are more common at the present day than they were 15 or 20 years ago; even if at that time they usually remained undiagnosed. If the mortality of all cases unoperated upon be as high as 95 per cent. now it was probably as high then. This being so, how is it that so few cases are to be met with in the post-mortem records of that date in which the cause of death was found to be a hæmatocele? No one can deny the excessive mortality of cases of rupture of the gravid tube if left alone, but that cases of hæmatocele due to tubal moles and tubal abortions unoperated upon have anything like the death-rate assigned to them by Mr. Taylor is hard to believe. Will Mr. Taylor kindly say how many cases of death, apart from operation and verified by post-mortem examination, he has seen due to these conditions? His first recorded operation for tubal mole was performed in 1890; his experience, therefore, like my own, must embrace a period when these cases were not usually operated upon, so that if his figures be correct he should have seen a very large number of such deaths. I can only say that I have not. I feel sure that the great interest of the subject will be a sufficient apology for this reply to Mr. Taylor's letter. The question of recommending or discountenancing operation in these cases is obviously one of the greatest possible importance to the patients.—I am, Sirs, yours faithfully,

Nov. 6th, 1899. THE WRITER OF THE REVIEW.

HOLIDAY FOR SCOTCH PARISH MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—The Irish Local Government Board having allowed the parish medical officers in outlying districts the advantage of a medical substitute paid from the rates during their annual holiday, I think that the Local Government Board of Scotland should follow their generous example in giving to their medical officers in the remote Highlands and islands of Scotland a like privilege. Many medical officers, especially in the Highlands, have but a meagre income and heavy working expenses, and can ill afford the services of a qualified locum-tenent. I trust that this proposal may have the support of many of your readers.

I am, Sirs, yours faithfully,

Nov. 2nd, 1899. OSTRACISM.

"THE WORKING OF THE NEW VACCINATION ACT."

To the Editors of THE LANCET.

SIRS,—I wish to endorse every word of the letter of "A Public Vaccinator" that appeared in THE LANCET of Nov. 4th. Personally I prefer to act towards my neighbours in accordance with the recognised rules of professional etiquette rather than carry out the new Act to the letter by visiting their private patients to offer vaccination. As regards the question of remuneration for families due to bad lymph I am also heartily in accord. I have recently employed ten tubes of National Vaccination Establishment calf lymph of the most unsatisfactory character. Two were absolute failures. One of these two involved a journey of 12 miles for the operation and one of similar length for inspection. As the repetition of both operation and inspection is inevitable an additional distance of 24 miles will have to be traversed without any extra remuneration.

I am, Sirs, yours faithfully,

Nov. 6th, 1899. PUBLIC VACCINATOR No. 2.

To the Editors of THE LANCET.

SIRS,—I agree with "A Public Vaccinator" and with much of the annotation in THE LANCET of Nov. 4th on the unpleasant and unprofessional duty of canvassing now imposed on public vaccinators. It has hitherto been the duty of the vaccination officer to visit the houses of unvaccinated infants, point out the advantages of vaccination, instruct the parents to take the infants to the vaccination stations at the appointed time, and if they neglect to do so to take the necessary steps to enforce the law. Under this system the public vaccinator did not go to the homes of the infants and could not be accused of direct canvassing. Now, the effect of the recent Act and the Local Government Board regulations is that the duties of the vaccination officer are to a large extent imposed upon the public vaccinator, and I consider that the vaccination officer should, when the infant is four months old, send a notice to the parents respecting vaccination and call and explain to them the advantages of the operation, and unless they say they intend to have it done by their own medical man he should tell them that the public vaccinator will call and vaccinate the infant free of charge. Having done so, he should send the public vaccinator a list of those requiring him. In any case, where the vaccination officer fails and the child is six months old and not vaccinated, he should send a more peremptory notice to the parents and ask the public vaccinator to call and offer vaccination previously to taking legal proceedings. By this means (which is only a modification of the system in vogue) many visits to the homes of our neighbour's patients and the greatest part of the unsatisfactory "hawking" and canvassing would be done away with. I am certain the majority of us would willingly give up the 1*s.* so-called registration fee to be rid of the work it entails, provided the fewer visits, paid as suggested above, carried a fee of, say, 2*s.* 6*d.* within three miles and 5*s.* beyond that distance.

We are, I take it, agreed that it is most essential to have vaccination as nearly universal as possible and to do so it is necessary that the public vaccinator shall visit the homes of the infants somewhat as laid down in the recent regulations. It is the details of the method which are at fault and not the theory. In my district 27·8 per cent. of the children vaccinated this year were over 12 months old, whereas 7·4 per cent. was the average for the previous four years. This means that by domiciliary vaccination many children are being vaccinated who under the old system would have escaped.

I found parents seldom brought a child more than twice or three times to the vaccination station and if then postponed they did not return. It is this class of cases which the new Act is most useful in reaching, for when a child survives the first year there is a much greater chance of his living and it is of more importance to have him vaccinated. Domiciliary vaccination has, I believe, come to stay, and it would be well to endeavour to remove all possibility of friction between medical men and at the same time make the operation popular amongst the public. This last can be greatly helped by the Local Government Board ensuring a supply of active lymph, for nothing causes so much wrath amongst parents as the constant failures occurring during recent months.

I am, Sirs, yours faithfully,

Nov. 7th. PUBLIC VACCINATOR No. 3.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Great Increase in the Plague Epidemic.—Partial Destruction of the Imperial Laboratory by Fire.—The Sick Returns of Indian Jails.

SIX thousand deaths from plague in one week is a bad record and unfortunately the numbers are still rising. For the whole of India the deaths from plague last week were 6727, to which the Bombay Presidency contributed 5812. There is a very serious extension into the Nizam's Dominions also, as 592 deaths occurred there. An outbreak is reported from the Saran District in Bengal where a large number of deaths above the average has been occurring for some weeks past. The Punjab is also reported to be again attacked, six cases having been discovered in Hoshiarpur. The general mortality in Bombay city is nearly 300 a week higher than it ought to be, and the plague figures are getting worse. Altogether the epidemic seems extending far and wide as well as re-appearing in its old quarters.

The report about plague *suddenly* subsiding in Poona is wrong. The outbreak has rapidly diminished in the city and cantonment, but the plague cases reported daily even now (Oct. 10th) average about 20, and in the district the cases and deaths are very numerous. The return of new cases given for Sept. 15th was published as *nil*, whereas for the two days (Sept. 15th and 16th) the actual figures were 163 cases and 139 deaths—a return very far from showing that the plague had *suddenly* subsided. Calcutta shows some improvement but the returns of from 30 to 40 deaths a week show that the disease has by no means become extinguished. It is unsafe to prophesy, but from the greater severity of the outbreak in Calcutta this year and the continued existence of what are termed "dropping" cases it is probable that after a further interval of quiescence plague will again develop itself.

Inoculation is coming more into favour. Several of the native papers in Bombay are endeavouring to induce their subscribers and the public to resort to inoculation. Some 2000 people have been inoculated in Hyderabad (Sind) and large numbers have availed themselves of its benefits at Nasik and other places.

The recent fire at the important Imperial Laboratory stationed at Muktesar was very disastrous. The whole of the apparatus and cultures for the preparation of mallein vaccine against glanders was destroyed, but fortunately the rinderpest vaccine apparatus was saved. The manufacture of the latter prophylactic is being continued with successful results in the outbuildings of the laboratory.

Great efforts are being made to reduce the high mortality in Indian jails. The Director-General has lately published an exhaustive note concerning the year 1898, and while generally there is some improvement he refers to many points which require to be more carefully investigated. The year 1898 seems to have been an exceptionally healthy one and the comparative absence of cholera is remarkable. Malaria is still one of the chief causes of mortality. Dysentery and diarrhœa give, perhaps, the greatest trouble to the medical officers. As Surgeon-General Harvey says: "There would be little exaggeration in saying that the prevention of bowel complaints is the beginning and end of jail hygiene." ..... "A common cause of bowel complaints, which perhaps does not always receive the attention that it deserves, is the presence of intestinal parasites. Probably the vast majority of prisoners are the hosts of at least one variety, and though no apparent harm results in many cases, in others diarrhœa, if not ulceration of the intestines, is set up." The widely spread and fatal character of cholera, malaria, and dysentery among the natives of India certainly does not support the law laid down by Dr. G. Archdall Reid, "that the resisting power of any race is exactly proportionate to its familiarity with the disease" The year 1898 was perhaps exceptional, but the study of figures for recent years shows how much has been achieved by the earnest attention of the jail administration and by the honest work of the executive officers.

Calcutta, Oct. 12th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Inebriates Act.

ON Nov. 2nd a case came before the local bench of magistrates in which some difficulty in the interpretation of the Inebriates Act appeared. A woman, aged 42 years, was charged with being drunk and disorderly. She had been convicted for the same offence four times during the past 12 months and 49 times during the past 12 years. The prosecution were prepared to prove that she was a habituaIn drunkard. The magistrates' clerk, however, explained that a person might be reclaimed in some better way than by being sent to the home, which seemed to be for people steeped in drink and who had been continually drunk for two or three years at least. The application of this severe test would certainly render the Act inoperative and do away with the reformatory provisions which it intended. If the number of convictions above mentioned do not constitute a habitual drunkard it is difficult to obtain any evidence more likely to be nearer the mark, and it appears to me to be just the kind of case for seclusion. However, the woman elected to be tried at the sessions. It is probable that the Recorder will enable us to arrive at some definite ruling as to the degree of drunkenness which constitutes a repeated offender of this type and clear the ground of the spirit as well as the letter of the law.

Midland Medical Society.

The fifty-first inaugural meeting of this society was held on Oct. 20th. The chair was taken by the President, Dr. E. Rickards. An address was given by Sir R. Douglas Powell, Bart., on the Treatment of Consumption. The prevention and initial treatment were discussed, the pathology and the modern methods of treatment were clearly explained, and the relative values of drugs and feeding were fully emphasised before a large audience. A cordial vote of thanks was afterwards accorded to Sir R. Douglas Powell.

Orthopædic and Spinal Hospital.

On Oct. 24th the eighty-second annual meeting of the governors and subscribers of this hospital was held under the presidency of the Marquis of Hertford. The report stated that the income had fallen short of the expenditure by £535 1*s.* 1*d.* The medical report showed that the attendances during the year had been 8155, the new cases 1553, and the operations 364 The work of the hospital had been much hindered for want of beds and room; it was now provided for by a house having been taken to serve as an outpatient department and home for nurses. The committee accepted with regret the resignation of Dr. C. Warden as acting surgeon and bore testimony to the value of his services for a long number of years, amounting to over 40. After the meeting an illuminated address was presented to Dr. Warden in recognition of his long connexion with, and faithful services to, the hospital.

Hospital Train.

The Birmingham Railway Carriage and Wagon Company are actively engaged in constructing a hospital train for the seat of the present war in South Africa. The train consists of seven ambulance coaches specially designed and fitted up. Another firm have also received large orders for carriages and rolling-stock which may be utilised for the same purposes if necessary.

Hospital Saturday and Hospital Sunday.

The distribution of cheques for the amounts apportioned to the various medical charities participating in the proceeds of this year's Hospital Saturday collection was made on Oct. 23rd by the Lord Mayor (Mr. Alderman Beale). The total amount exceeded £18,000. The Hospital Sunday collection this year was for the Queen's Hospital. The amount reached £5081.

Mason University College.

At a meeting held on Oct. 30th Mr. J. W. Taylor was nominated to the Council as Professor of Gynæcology in the place of Dr. T. Savage, resigned. Mr. Taylor was the only candidate.—Dr. R. M. Simon has been appointed Ingleby Lecturer for the present year. Dr. Simon has chosen as his subject, "The Treatment of Eczema and Allied Conditions in Women and Children."

Nov. 7th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Seamen's Eyesight Question: Address to the Mercantile Marine Association by Mr. T. H. Bickerton.

AN interesting paper was read before the Mercantile Marine Service Association by Mr. T. H. Bickerton, ophthalmic surgeon to the Liverpool Royal Infirmary, on the subject of Colour Blindness and Defective Vision in the Mercantile Marine. Mr. Bickerton remarked at the outset that three years ago he read a paper before that association on the sailors' eyesight question, as a result of which a resolution was passed urging upon the Board of Trade, shipowners, and others the imperative necessity for testing the eyesight of all sea-going apprentices previously to entering on board ship, and further expressing the opinion that the present vision tests as applied to candidates for Board of Trade certificates should be conducted by qualified examiners with the right of appeal to the higher authority, and that in all cases of official inquiries under the Merchant Shipping Acts in which the question of form or colour vision might be concerned, the sight of witnesses should be tested. To that resolution the Board of Trade replied that they had no statutory powers to enforce qualifications of any kind in the case of any person entering the mercantile marine until he presented himself for examination as second mate; that the present tests were conducted by examiners carefully selected as to their qualifications; that the rules already provided for an appeal to the Board of Trade, and should there be any case of an official inquiry in which the question of form or colour vision might be concerned arrangements would certainly be made for testing the sight of witnesses. Since then the position of this important subject had undergone no alteration. In the year 1894 the authorities admitted the inefficiency of the tests then in existence, and adopted the Holmgren wool test which is now in force. That test did not discriminate between the person of normal colour vision and one who had a weak colour sense. Not only had the present test failed to discover faulty colour vision but the regulations dealing with the subject did not fulfil the purpose for which they were instituted—viz., the elimination of the colour-blind from the sea life. Mr. Bickerton admitted that this criticism of the generally accepted method of testing for colour-blindness might come as a surprise to some of those who had watched the development of the colour-blind question. He was himself up to a comparatively recent period a firm believer in the all-sufficiency of the test; he had, in fact, informed the Royal Commission which investigated the question of seamen's eyesight that he was prepared to pin his faith to the Holmgren wool test. But there was no finality in scientific research and history furnished them with many examples of the accepted theories of to-day becoming the fallacies of the future. He desired to make it thoroughly clear that cases which had come under his observation proved conclusively that the Holmgren wool test was by no means a certain discoverer of the lesser marked forms of colour-blindness. Under the present test, established in 1894, the total number examined up to the end of 1898 was 21,720 and the failures to pass in colours reached 215, a percentage of 0 989. If to these were added the 702 failures in the previous 17 years under the former test the result was a grand total of 917 individuals who had been stamped as colour-blind by the Board of Trade in the last 21 years. Where were these 917 colour-blind sailors? In spite of their defect it was a known fact that these men were allowed to continue their calling to the menace of the public safety. Mr. Bickerton deplored the attitude of the Board of Trade on the subject. Thousands of inquiries into shipping collisions, many of these attended with great loss of life, had been held, and yet not in one single instance had the Board of Trade ordered the testing of the witnesses for defective vision or colour-blindness. Since 1894 no less a number than 187 sailors, including 36 officers, had been officially declared to be nautically blind, but that was no bar to their continuing a seafaring life. Mr. Bickerton concluded his interesting address by asking how it was possible to discover officially under existing methods a case of shipping disaster due to defective sight or colour-blindness in the absence of the examination of the witnesses' eyesight? The criticisms of Mr. Bickerton and others in the

matter of this important subject cannot be longer ignored by the Board of Trade.

The Opening of the Liverpool Country Hospital for Chronic Diseases of Children.

A few months ago THE LANCET recorded the initiation of a movement in Liverpool which had for its object the establishment in the country of a hospital for diseases of children which, although chronic in character, were yet largely curable. There are many diseases of children for the cure of which a prolonged stay in hospital is absolutely necessary. The general hospitals cannot retain these patients beyond a certain time limit to the exclusion of acute cases. For the benefit of these little sufferers the new wing of the Children's Convalescent Home at West Kirby was opened by Sir Edward Russell on Nov. 4th. Although connected with the convalescent home the new charity will be quite independent, and will be managed by a separate committee. The situation of the hospital in the salubrious neighbourhood of West Kirby will afford the best hygienic conditions to effect a cure and to rescue the children from permanent deformity. The hospital is not intended for cripples, nor will it be a home for incurables. Only such cases as will afford a reasonable prospect of recovery can be admitted. So far the movement has been highly successful. Donations have come in freely. Altogether the new project has been enthusiastically approved by the philanthropic public of Liverpool. The cost of maintenance will be at the rate of £25 per bed. A small charge of 3*s.* 6*d.* per week will be made to patients without nominations. Generous donors have endowed cots, and in many cases have presented the nomination of a patient to a general hospital. The hospital will be in touch with the Royal Infirmary, the Royal Southern Hospital, the Stanley Hospital, and the Birkenhead Borough Hospital through nominations presented by donors. The West Derby Board of Guardians have provided £50 a year for the endowment of two beds, whilst other subscribers have generously afforded assistance in other ways. Amongst others who have taken an active interest in the foundation of the new hospital the names of Miss Sedgwick, Miss Gaskell, Dr. Charles J. Macalister, and Mr. Robert Jones may be specially mentioned. It has been a source of gratification to the promoters of the hospital to find the need for the new undertaking evidenced by the fact of the 21 allotted beds being all occupied on the auspicious occasion of their inauguration on Saturday last.

The Liverpool School of Tropical Diseases: First Autumn Session.

The first autumn session of the School of Tropical Diseases has now commenced. Amongst those who have entered for the course are Professor Ribbing of Lund University, M. Neven Lemaire, curator of the Museum of Natural History at Paris and a distinguished pupil of M. Blanchard, and several army surgeons who, however, have been unable at the last moment to attend the course, having been ordered to proceed to South Africa. Official intimation has been received from the Japanese Government that they have appointed Dr. S. Miyamoto, professor in the College of Medicine at Tokio, to proceed to England to undergo the course at the Liverpool school. The Colonial Nursing Association have sent three nurses to be specially trained here. The nurses are attached temporarily to the Royal Southern Hospital.

The New Isolation Hospital at Chester.

A new isolation hospital was opened at Chester on Oct. 27th by the mayor, in the presence of a large gathering. The foundation stone of the new building was laid on Jan. 25th, 1898, and the design of the building is extremely simple. The hospital comprises an isolation pavilion and three ward pavilions, all one-storeyed, and an administrative block facing the entrance which is three-storeyed. The pavilions have been placed diagonally and in echelon, to obtain a southern aspect. The hospital will provide 50 beds and the administrative block is of sufficient size to meet a future extension to 80 beds. The isolation pavilion is divided into two separate buildings by a division wall carried throughout the entire width, and it contains four wards with two beds in each ward for the treatment of undeveloped cases or for paying patients. Two of the other pavilions contain two wards of six beds each, while the third pavilion contains one ward with four beds for acute cases and another ward with ten beds for convalescent cases. The heating arrangements are of the most approved character and the building is to be lighted by electricity. The three-storeyed administrative block in which the opening ceremony took place is the most prominent feature of the hospital looking from the roadway. It provides ample accommodation for the staff and has a kitchen department at the rear one storey in height. The institution has been splendidly furnished for its intended purposes. The mayor was presented with a gold key bearing a suitable inscription after the formal opening of the hospital.

Nov. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Rectorial Elections.

ON Nov. 4th the triennial election of Lord Rector for the University of Edinburgh took place, the result being a victory for the Unionist candidate, the Marquis of Dufferin and Ava. The voting went as follows:—

Lord Dufferin	943
Mr. Asquith	686
Majority for Lord Dufferin	257

As usual, while the voting was going on there were lively skirmishes between the two parties of students in the quadrangle, bags of ochre being employed to give colour to the proceedings. In the evening the students, according to custom, brought the day to a close by a torchlight procession. In spite of very bad weather about 1800 students took part in the procession, many of them arrayed in fantastic costumes and wearing masks. After having marched to the west end of the town and back through the principal streets the students gathered on the Castle Esplanade and made a bonfire of their torches. Before they dispersed, about 10 o'clock, they joined in singing on the Esplanade "Rule Britannia" and "God Save the Queen." Considerable crowds waited on the route to see the procession and at some places it was only by the aid of the police that the students were able to keep their line and make progress.

Edinburgh Health Lectures.

On Nov. 4th Professor Hunter Stewart of Edinburgh University delivered the opening lecture of the sixteenth session of the Edinburgh Health Society, taking as his subject "Vaccination." The lecture was illustrated by lime-light views.

The Dairies, Cowsheds, and Milkshops Order of 1899.

On Oct. 17th the Local Government Board for Scotland issued an Order amending the existing Dairies, Cowsheds, and Milkshops Orders, revoking Article 14 of the same, and providing that regulations made by a local authority under the Order shall not take effect unless and until they have been submitted to, and confirmed by, the Board, who may allow or disallow the same as they may think proper. Article 15 of the Order of 1885 is altered so that the expressions which refer to disease shall include in the case of a cow such disease of the udder as shall be certified by a veterinary surgeon to be tuberculous. The effect of this will be to make it illegal for the milk of such a cow to be sold or used for the food of man or unless previously boiled for the food of swine or other animals. Article 15 applies to all milch cows, whether their owners are registered under the Order or not. Article 13 of the Order of 1885 enables local authorities to make regulations for the inspection of cattle in dairies, and the Board now invites the attention of local authorities to certain specified recommendations of the Royal Commission on Tuberculosis which reported in 1898. These recommendations specify for each adult beast a minimum cubic air space of from 600 to 800 feet and a minimum floor space of 50 feet.

New District Asylum for Aberdeen.

The Aberdeen Parish Council have acquired the adjoining estates of Rainnieshill and Kingseat, about 12 miles from the city, at the respective prices of £27,500 and £6250, and have ordered plans to be prepared of a new lunatic asylum to be erected there.

Aberdeen University Medical Society.

At the opening meeting for the winter session on

Nov. 3rd an address on Medical Manners and Economy was delivered by Dr. W. Bruce, Dingwall. Professor Cash presided and there was a large attendance of students.

Nov. 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Dublin.

Two circumstances have recently occurred which tend to allay public anxiety in this regard. In the first place, the death-rate for the week ending Nov. 4th has fallen to 37, and, secondly, the corporation at a meeting held on Nov. 6th resolved, by a majority of one, to subsidise Cork-street Fever Hospital in order to meet without further delay the wants of the present epidemic. The isolation hospital question has been shelved, at least for the present. The high death-rate which still prevails is largely due to the infant mortality from measles, but typhoid fever still exists to an alarming extent. Epidemics of the latter have recently occurred in situations and institutions in which they would not be expected to arise. Not very long ago an outbreak occurred in the Mountjoy police barrack which was clearly proved to be due to milk supplied from a dairy on the Phibsborough-road. Now a far more serious epidemic of typhoid fever, affecting the inmates of the depôt of the Royal Irish Constabulary in Phœnix Park, has just proved the subject of a sworn inquiry before an inspector of the Local Government Board. The evidence was concluded to-day (Nov. 7th), and though the report of the inspector has not been made it is perfectly clear that in this case also the outbreak was due to milk distributed from an infected dairy in which both the owner and his daughter suffered from enteric fever. A serious state of things was, moreover, disclosed, for it appeared that the dairy, though existent for 14 years, had never been registered and therefore never inspected. The evidence showed the wretched and insanitary state of its surroundings. This epidemic has been a sufficiently serious one. The typhoid fever patients from the constabulary depôt were, of course, removed to the Mater Misericordiæ Hospital or to Dr. Steevens's Hospital. The medical officer from the Castleknock district deposed that he alone attended 38 cases. It is to be hoped that the Local Government Board inspector, Dr. Edgar Flinn, will see his way to bring about a complete reform in the sanitation of this district.

Health of Belfast.

At a meeting of the City Council on Nov. 1st it was reported that between Sept. 24th and Oct. 21st 278 cases of typhoid fever, 81 of scarlet fever, 78 of simple continued fever, 45 of erysipelas, 25 of diphtheria, seven of small-pox, five of puerperal fever, one of typhus fever, and four of membranous croup had been reported. The annual death-rate was 22·9. The health of the city during the past four weeks has gradually improved. The cases of small-pox all occurred in one district and of the seven it was found that two were not affected with the disease; one (an infant) died, the others recovered.

The Ulster Medical Society.

The first meeting of the present winter was held on Nov. 2nd in the Museum, Belfast, a very large number of members being present. The retiring president (Dr. Nelson) having thanked the members for the honour they had done him introduced his successor, Dr. Graham. A vote of thanks, on the motion of Professor Byers, seconded by Dr. Dempsey, having been accorded to Dr. Nelson, the new President (Alderman Graham, M.D. R.U.I., chairman of the Public Health Committee of the City Council) delivered a most interesting opening address on the Sanitary History of Belfast, in which he contrasted the city of the past with that of the present day and showed what sanitary science had done. Among other matters still to be accomplished he advocated strongly the erection of a new hospital for infectious diseases, as being absolutely needed in Belfast. Dr. Henry O'Neill proposed, and Dr. Kevin seconded, a warm vote of thanks to Dr. Graham for his admirable presidential address. The report of the council was then considered as were the new rules of the society, which, with some emendations, were passed. The annual dinner is to be held in the Prince's Restaurant on Nov. 23rd.

Boards of Guardians and Dispensary Medical Officers' Holidays.

A very interesting test case in reference to the question of dispensary medical officers' holidays and the payment of their substitutes has just been tried and decided at the Quarter Sessions, Coleraine, on Nov. 1st, by County Court Judge Overend. The facts are as follows. Dr. Creery of Coleraine, a dispensary medical officer, applied on August 4th, in accordance with Article 28 of the rules made by the Local Government Board, for his holidays (a month) and nominated as his substitute Dr. Law, stating that his fee would be three guineas per week. On August 8th the clerk of the union wrote to Dr. Creery intimating that the guardians had granted him leave of absence, and on the same day to Dr. Law that he had been appointed locum tenent for four weeks at two guineas per week. Nothing was said to Dr. Creery about remuneration. Dr. Law promptly replied that he could not think of accepting two guineas per week. The guardians then held meetings and discussions without end; some voted in favour of paying £2 10*s.*, others in favour of three guineas, but nothing more was done and Dr. Law's appointment was not cancelled and he was not told not to act. Dr. Creery, on hearing there was some tension about the remuneration, wrote to the Local Government Board, and on Sept. 1st he received an answer from the Secretary of that authority enclosing a copy of a letter addressed to the guardians approving of Dr. Law's appointment "at a remuneration of three guineas a week." After this letter from the Local Government Board nothing remained for the guardians but to employ Dr. Law, which they did, but they would not pay his fees and hence the action. Evidence having been given and counsel heard on both sides, his Honour, the county-court judge, decided that a clear case of work done by Dr. Law at the request of the guardians had been established, and he gave a decree for 12 guineas and also certified for counsel and one guinea expenses for Dr. Creery. "If," said the judge, "the guardians thought there was any point in which they were hurt by the Local Government Board, it was quite plain they could commence next year and advertise for tenders for the substitute among qualified men and ask each to say at what price he will act next September, then they could go on with the controversy. But it seemed to him, in this particular case, they had no answer to the claim for 12 guineas." This case, which has occasioned great interest among members of the medical profession and the general public, is the first one to be fought, and by it the fair and reasonable action of the Local Government Board has been sustained. It is hoped it will be a case which will rule others if brought forward.

The Sanitation of Larne.

Dr. Clibborn (Local Government Board Inspector) has reported to the Larne Urban Council that more attention should be paid to the sanitary condition of the place, which is a popular seaside resort for Belfast citizens. He says that there is no inspector of dairies, cowsheds, and milkshops in the district and that the state of the rivers is a serious source of danger to public health. The lodging-house by-laws are not strictly enforced and he is informed that the common lodging-houses are not regularly inspected. The urban district council use the ambulance belonging to the guardians for the conveyance of patients suffering from infectious disease to hospital. The small disinfecting chamber in connexion with the fever hospital is not of the modern type and there is no systematic inspection of the meat and milk supplies. It is hoped that the matters reported on will be put right soon.

Nov. 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Hæmostatic Effects of a Condition of Nausea.

AT the meeting of the Society of Biology held on Oct. 21st Dr. Onimus gave an account of some very original observations which he had recently made. A patient of his, a young man suffering from phthisis, had told him that he had found that the only way to stop himself from spitting blood was to go out on the sea when it was rough and that the sea-sickness thus produced always stopped his hæmorrhage. Dr. Onimus compared this experience with the well-known effect

of ipecacuanha, except, of course, in cases where the hæmorrhage comes from a large vessel at the bottom of a deep cavity. He then determined to apply the treatment in cases of hæmorrhage due to another cause. In the case of certain women who had no obvious organic lesion but who suffered from profuse menorrhagia he prescribed that they should take every two hours, until they began to feel sick, a cachet containing 10 centigrammes (one and a half grains) of Dover's powder with the addition of one centigramme (from one-sixth to one-eighth of a grain) of ipecacuanha. During the interval between the periods the patients took every evening at bedtime a similar cachet. The results surpassed his expectations, for the periods became quite normal, a condition the patients had not experienced for years.

The New Hospital in the Rue Etex.

The Rue Etex Hospital, which is just finished, is intended, together with that in the Rue Michel-Bizot, to take the place of the Trousseau Hospital. It is built on an extensive site bounded by the Rue Etex, the Rue de Maistre, and the Rue Carpeaux. Close to the chief entrance in the Rue Carpeaux are placed the laundry, the kitchens, and the dispensary. To the right is the mortuary and to the left are the offices and the consultation-rooms. In the Rue Etex, but completely separated from the rest of the hospital, are the observation wards, four isolation wards, and a block for nurses and other officials for this particular department, with an external corridor for communication. The surgical, medical, and infants' wards are in the very middle of the hospital, while the diphtheria wards are at the extreme ends. The works were not very easy to execute and the foundations consist of 10 or 12 metres' depth of concrete. The waiting-rooms, the general offices, and the corridors are paved with stone, while the thickness of the walls averages 45 centimetres; they are built of ashlar faced with brick. There remain only the interior fittings of this magnificent building to be completed. The architect is M. Heizeux, who received the prize at a competition in 1896. The total cost has been 2,920,000 francs, including a sum of 97,000 francs for drainage works. Finally, the hospital makes provision for 234 children, both boys and girls.

Professor Calmette on the Plague.

The Society of Public Health and Hygiene asked Professor Calmette on his return from Oporto, and before he went back to Lille, to give a lecture on the plague in Portugal. The lecture was given on Oct. 25th and so many were the applications for seats that it had to be delivered in the large theatre of the Faculty of Medicine, which was specially lent for the purpose by the Dean, Dr. Brouardel. On the platform were Professor Landouzy, the president of the society, together with M. Duclos, Dr. Brouardel, M. Proust, M. Napias, M. Martin, and others. M. Landouzy introduced the lecturer who, he said, although young in years, had yet won for himself world-wide fame. M. Calmette then commenced his lecture and in plain, simple language gave an account of the epidemic of plague, tracing it from its origin in China to its present existence in Oporto, of which he gave a long description. He dwelt at length upon the admirable results, both prophylactic and curative, which he had obtained by means of the serum which he took with him from the Pasteur Institute to Oporto. From the very commencement of his trials in Oporto he had to fight against the prejudices of other foreign medical men, especially Germans, who were still under the influence of the incomplete results obtained in Asia by M. Yersin with his serum. Professor Calmette's own serum was obtained by employing quite different methods and was entirely due to the persevering work of M. Roux. Its use at once gave such good results that the Portuguese medical men, through sceptical at first, gave him every facility for trying it in the Oporto Hospital. The outcome was that the mortality in the hospital went down from 43 per cent. to 14 per cent., or even less if one were to take into consideration that patients were there who were suffering from such complaints as tuberculous meningitis, puerperal fever, and peritonitis. M. Calmette went on to say that it was not possible to affirm that plague would not spread beyond Oporto and that even if there were no more human cases we should have to wait months or even years before it finally died out among rats and mice. If plague were to be introduced into France through an infected patient it could be isolated as easily as it was at Vienna, but infection by rats was far more difficult to stop and he therefore counselled the pitiless destruction of these rodents. If by some unfortunate chance plague did make its appearance inoculation was a certain method to limit the epidemic and, as far as mortality went, to render it one of the least fatal of any infectious diseases. M. Calmette concluded amidst loud applause and Professor Landouzy brought the proceedings to a conclusion with a graceful little speech of thanks.

Nov. 6th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Influence of Civilisation on the Duration of Human Life.

ON Nov. 3rd the University of Turin opened its winter session by a discourse from Dr. Camillo Bozzolo, Professor of Clinical Medicine in that seat of learning. His theme was, "L'Influenza della Civiltà sulla Durata della Vita Umana," and he handled it with characteristic intelligence and skill. The interest taken by all classes in social questions—an interest formerly confined to the cultivated and leisured few—was kept alive, he said, by the constantly recurring question how far the modern man bears comparison with his mediæval or ancient counterpart as to physical, vital, and moral energy and as to the longevity which is the resultant of these forces. Certainly the ease and rapidity of intercommunication contribute to the diffusion of exotic diseases, while nearer home others are produced by modern industries and modern vices, such as alcoholism—diseases and vices developed, if not wholly initiated, by the fever and fret of this work-a-day competitive world. To these adverse conditions in modern life we may fairly oppose the unhappy lot of mediæval and ancient communities, visited at brief intervals by wars, famines, pestilences—visitations often the outcome of prejudice or superstition and often aggravated by the folly of the masses, by the fantastic medical theories in vogue, by the imperfection of hospitals, and by the lack of well-nigh all those means of precaution or assistance so justly admired in the social fabric of to-day. Of such visitations, how they originated and whence they drew sustenance, Professor Bozzolo gave a series of typical examples and then proceeded to contrast with them the beneficent, profound, and at the same time comprehensive, influences brought to bear by medical culture and hygiene in restricting the area of disease and in enhancing the resisting power of those subjected to it. Like a loyal member of the sub-alpine school which has put itself at the head of the vindicators of vaccination abroad he dwelt on the signal diminution of small-pox due to the Jennerian prophylactic—a diminution which has everywhere resulted in the absolute annihilation of the disease, according as "la doppia vaccinazione" (vaccination and revaccination) are made obligatory and systematic. From this position he passed on to the demonstration that "la mortalità complessiva" (mortality collectively considered) is steadily declining; in Italy, for example, though in the last few years the population has increased by 5,000,000, there were 132,000 fewer deaths in 1897 than in 1872, while in Turin itself within the last 25 years the mortality has sunk to within a fraction more than 11 per 1000. In all countries, moreover, we find the proportion of deaths for each group of ages up to old age to be diminishing, yielding for every individual-age a greater probability of longevity; and this fact, he proceeded to show, is the more outstanding as the particular country under review happens to be more civilised. In Italy the mean life for the entire population in the period between 1872 and 1891 has been prolonged by about seven years. Civilisation, therefore, has extended the human span; and in proportion as civilisation advances there will be a progressively diminishing number of those who die before reaching the ordinary life-limits. With all this, as Professor Bozzolo set out by remarking, there are in human progress a series of circumstances which make for the development, if not for the absolute origination, of a certain number of diseases. Among these, as already instanced, is alcoholism. Suicides also increase, either as the direct result of alcoholism or by the accentuation of morbid desires or of passions equally morbid. If, however, there is the semblance of an increase of neuroses it is well to bear in mind that, thanks to the progress of science, many new forms of nervous disease are observed and classified—forms which certainly existed before,

but which were practically unknown because not subjected to study. In conclusion Professor Bozzolo remarked that for a long time statesmen, philanthropists, and sanitarians have tried, with tabulated figures, to put in evidence the difference between the death-rate of the several social strata; the statistician, meanwhile, indifferent to any political or social interest whatever, has demonstrated it as a fact that the mortality of the poor is everywhere almost double that of the well-to-do. How to obviate this serious, this sad difference between the two classes? Be it the evermore vigilant task, as it is the evermore pressing duty, of civilisation to minimise, and finally to annul, this difference. Then followed the speaker's peroration in which he appealed to his young audience to fulfil that duty and perform that task, not by demagogic arts, setting class against class, and widening instead of abridging the gulf between them, but by strengthening the hands of science—science of the laboratory and of the clinical ward—as a preliminary to the reforms on which alone the sound and lasting amelioration of the individual and of the masses can rest. "That science," he said, "which has subdued the sea, pierced the mountains and scaled their summits; which, having sped the waves of thought across seas and continents, can confine them in a narrow apparatus only to re-project them at will into space and to impose on them the direction required; that science which, having essayed the orbit of the stars like a new Titan, wages war against the heavens, rending clouds and controlling tempests; which, studying the infinitely little in organised life, can defend mankind from the maladies these infinitesimal beings convey and, overcoming disease, can blunt the scythe of death,—that science will not fail to shed its blessings on all men without distinction of person or of class. It has never failed, it never can fail, because its guest is the truth with which it is synonymous. Study, therefore, and work, my young friends, because truth is the offspring of study and man's health and happiness lie in work." Professor Bozzolo's most interesting and eloquent discourse will shortly be made *publici juris*, appealing, as it does, to a much wider audience than that to which it was addressed.

Nov. 4th.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Brussels:* Dr. Ostmel has resigned the chair of Psychiatry.—*Gratz:* Dr. Hermann Zingerle has been recognised as *privat-docent* of Psychiatry and Neuro-Pathology.—*Rostock:* The charge of the newly-erected Clinic for Diseases of the Ear, Nose, and Throat has been given to Professor Koerner.—*Turin:* Dr. Isnardi has been recognised as *privat-docent* of Surgical Pathology.—*Vienna:* The charge of the late Professor Stoerk's laryngological clinic has been taken over by Professor Chiari. Dr. Ritter von Töply will henceforth lecture on the History of Medicine in place of Professor Puschmann, deceased. Dr. Adolf Hirsch has been recognised as *privat-docent* of Psychiatry and Dr. Julius Tandler as *privat-docent* of Anatomy.

PRESENTATIONS TO MEDICAL MEN.—At Stanhope, Darlington, on Oct. 24th, Mr. Thomas Livingstone, M.D. Glasg., and Mrs. Livingstone, on the occasion of their silver wedding, were presented with a massive silver bowl, handsomely chased and embossed, on an ebony stand, and also with a large silver inkstand. The inscription on the bowl reads, "Presented to Dr. and Mrs. Livingstone by the members and teachers of the Stanhope School Board and other friends as a memento of their silver wedding and as a token of the Doctor's long and faithful services to education." Dr. Livingstone is magistrate for the county of Durham and an alderman of the county council. He has been a member of the Stanhope School Board ever since it was formed 26 years ago and for 12 years has been its chairman.—At the meeting of the Redruth (Cornwall) District Council held on Oct. 20th Mr. A. Carkeek, on behalf of the members of the council, presented a silver cradle to Mr. Arthur Edward Permewan, M.D. Lond., M.R.C.S. Eng., J.P., during whose year of office a child had been born to him.—At the conclusion of a course of lectures on nursing and hygiene in connexion with the St. John Ambulance Association given at Clevedon on Nov. 1st the members of the class presented the lecturer, Mr. H. Rogers-Tillstone, M.D., C.M. Aberd., with an illuminated address and a cheque in appreciation of his services. Dr. Rogers-Tillstone has given the money to the funds of the St. John Ambulance Association.

DRAINAGE OF EXMOUTH.—The sewerage works for Exmouth, which will be shortly commenced, are estimated to cost about £30,000.

THE Corporation of the City of London have decided to promote a Bill in the next session of Parliament for power to erect a crematorium at their cemetery at Little Ilford and baths and washhouses in the City.

UNIVERSITY OF CAMBRIDGE.—Dr. Grafton Elliot-Smith, B.A. Cambridge, M.D. of the University of Sydney, who has highly distinguished himself by his researches on the comparative anatomy of the brain, was on Nov. 6th elected to a Fellowship in St. John's College. Dr. Elliot-Smith entered the University three years ago as an "advanced student" under Dr. MacAlister.—Mr. T. Holmes, F.R.C.S. Eng., has been appointed a member of the Medical School Buildings Syndicate.

THE EYESIGHT OF SCHOOL CHILDREN AT LEICESTER.—At the monthly meeting of the Leicester School Board this week Dr. Bennett said he thought it might be of interest to the Board if he read a report which had been drawn up by Dr. Henry of Leicester who was some time ago requested by the Government to make an examination of the eyes of children attending the elementary schools of the town, with a view to ascertaining the proportion of children who were short-sighted. Dr. Henry, in his report, stated that during the past three years children to the number of 7175, of whom 3560 were boys and 3615 girls, had their sight tested at the 10 schools under the jurisdiction of the Board. 1966, or 55 per cent., of the boys and 1647, or 51 per cent., of the girls had normal vision in each eye. Of the remainder who had defective vision 2078, of whom 999 were boys and 1079 girls, were further examined with the consent of their parents in order that the cause of the defect might be ascertained. Of these 13·7 per cent. of the boys and 11·8 per cent. of the girls were emmetropic in each eye, 69·6 per cent. of the boys and 68.5 per cent. of the girls were hypermetropic in each eye, while a considerable degree of hypermetropia was present in 5·7 per cent. of the boys and in 4·3 per cent. of the girls examined. Myopia was present in both eyes in 5·4 per cent. of the boys and in 5·8 per cent. of the girls, while it was found in one or both eyes in 9·3 per cent. of the boys and in 10·8 per cent. of the girls. Assuming that there was a similar percentage of myopia among the children with defective sight who, through refusal of the parent to consent to their examination, or who, through absence, were unseen, and that no short-sight existed among those children returned as having normal vision, it was found that 2·4 per cent. of the boys and 2·8 per cent. of the girls at the 10 schools visited were short-sighted in both eyes and that 4·1 per cent. of the boys and 5·4 per cent. of the girls were short-sighted in one or both eyes. Myopia of a degree which would disqualify for the Indian Civil Service was found in 1·2 per cent. of the boys and in 2 per cent. of the girls examined. The amount of myopia found, however, compared favourably with that reported to exist in other counties; in Germany 10 per cent. and in America 7 per cent. of those attending elementary schools were short-sighted. Dividing the children examined into two groups, those aged 7, 8, and 9 years and those aged 10, 11, and 12 years, 3·7 per cent. of the boys in the younger group were myopic as compared with 6·4 per cent in the older group, whilst 6·4 per cent. of the girls in the younger group were myopic, as compared with 10·4 per cent. in the older group. In other words, defective sight was due to myopia in nearly twice as great a percentage of cases in the older children as in the younger, whilst myopia which would disqualify for the Civil Service was present in three times as large a percentage in one group as in the other. Astigmatism was found in a high degree in 2·5 per cent. of the children examined. Dr. Henry concluded his report with some suggestions to the Board on the subject, one of which was that at the commencement of each school year each child should have his or her sight tested and the result entered opposite the child's name in the class register so as to ensure the condition of any particular child's sight being kept constantly in the teacher's memory.—The Board passed a hearty vote of thanks to Dr. Henry for his report.

WATER-SUPPLY OF PAIGNTON.—At the meeting of the Paignton District Council held on Nov. 1st it was decided to apply for Parliamentary powers to proceed with the water scheme. The expenditure is estimated at about £40,000 and comprises the purchase of 700 acres of land at Holne and the construction there of a large reservoir.

A GERMAN SURGEON FOR THE BOERS.—According to the *Allgemeine Medicinische Central-Zeitung* Dr. Küttner, *privat-docent* of Surgery in the University of Tübingen, who was deputed by the Red Cross Society to attend the wounded in the Russo-Turkish War, has also been sent by that society to the Transvaal to assist the Boers with their ambulances.

BRIDGWATER INFIRMARY.—The annual meeting of the Bridgwater Infirmary was held on Nov. 2nd under the presidency of Mr. G. F. Luttrell. The medical report, presented by Mr. F. J. C. Parsons, showed an increase of work as compared with the preceding year. The financial statement showed a deficit balance of £232. Mr. W. Broadmead of Enmore Castle was elected president.

OCKENDEN CONVALESCENT HOME.—Lady Helen Vincent re-opened the Ockenden Convalescent Home at Torquay on Nov. 2nd. The home was founded in 1890 by Miss M. Erle, who died last year, and it has now been given by her sister, Miss Eleanor Erle, for the use of patients from the Royal Devon and Exeter Hospital. With the gift of the home Miss Erle gave £400 to cover the cost of completely renovating the building.

VACCINATION RETURNS.—At the meeting of the Wells (Somerset) Board of Guardians, held on Oct. 25th, it was stated that 318 successful vaccinations had been performed during the year ended Sept. 29th, against 266 in the preceding year.—At the meeting of the Bradford-on-Avon (Gloucestershire) Board of Guardians, held on Oct. 30th, it was reported that during the year ended Sept. 29th there had been 77 children successfully vaccinated, as compared with 47 in the previous year.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.—The annual entertainment of the School (Ladies' Night) will take place at St. Martin's Town Hall on Thursday, Dec. 7th, at 8.30 P.M. During the evening Surgeon-General J. B. Hamilton, late principal medical officer, Cape Town, will distribute the prizes. The proceeds of the entertainment will be handed to the British Red Cross Society for aid to the sick and wounded in the South African war. Past and present members of the school can obtain tickets by making early application for the same to the Mess President, 8, Portman-street, W.

THE GOOD WORK OF THE COAL SMOKE ABATEMENT SOCIETY.—At the West London Police court on Thursday, Nov. 4th, the Manbre Saccharine Company, Limited, were summoned for allowing dense volumes of black smoke to issue from a chimney-shaft at their Hammersmith works on five occasions—viz., Sept. 11th (to the extent of 20 minutes), Sept. 14th (15 minutes), Sept. 16th (10 minutes), Sept. 21st (seven minutes), and Sept. 28th (10 minutes). The prosecutions were undertaken by the vestry. Evidence having been given by Mr. J. C. Jackson, the medical officer of health, and by the vestry inspector (Mr. Manning), Mr. George Petty, the inspector of the Coal Smoke Abatement Society, gave evidence in support of the vestry's case. He produced a diagram showing the density of the smoke and gave details as to the time and extent of the alleged offences. The case for the defence was that the company had taken all reasonable precautions to prevent the emission of black smoke and that if there had been any offence against the Public Health Act it was entirely due to the carelessness of the stokers, who presumably had used a cheaper coal—which should only have been used for banking up the fires at night—instead of the Welsh smokeless coal which they had instructions to use for firing purposes. The defendants assured the court, however, that they had now got rid of this cheaper coal and intended only in future to use the best Welsh smokeless coal and thereby not lay themselves open to the carelessness of their servants. During the evidence it was stated that the company were paying about £3500 a year more for Welsh coal than they would have to pay for cheaper coal and that their requirements now necessitated their using over 250 tons of Welsh smokeless coal every week. The magistrate said that clearly there had been an offence against the Act, but as the defendants had given an undertaking that none of the cheaper coal would again be used the justice of the case would be met by fining them a nominal amount—viz., £1 on each of the five summonses, with costs in each case.

UNDER the stress of excitement consequent upon the order of the Local Government Board that he should relinquish his post of district medical officer, Mr. R. J. Burns died on Oct. 31st from the effects of poison self-administered.

CLAYBURY ASYLUM.—On the afternoon of Nov. 5th the Crown Prince of Siam, together with members of the Siamese Legation, accompanied Mr. Frederick Verney, L.C.C., and the medical staff on a visit to the Claybury Asylum at Woodford-bridge, Essex. Much satisfaction was expressed at the great care taken by the London County Council in the treatment of the insane and also at the scientific work carried on in the laboratory of this the newest and largest of the asylums of London.

LITERARY INTELLIGENCE.—Rebman, Limited, announce the following new books for immediate publication:—Vol. I. of "An International Text-book of Surgery," by British and American authors, in two vols., edited by A. Pearce Gould, M.S. Lond., F.R.C.S. Eng., of the Middlesex Hospital, and J. Collins Warren, M.D., LL.D., of Harvard Medical School. A new "Text-book of Diseases of the Nose and Throat," by D. Broden Kyle, M.D., of Philadelphia. A work on the "Hygiene of Transmissible Diseases," by Dr. A. C. Abbott of Philadelphia, and one on the "Pathology and Treatment of Sexual Impotence," by Victor G. Vecki, M.D. A "Text-book of Physiology," by Professor Winfield S. Hall of Chicago. "Minor Surgery and Bandaging," by Henry R. Wharton (fourth edition). Vol. I. of "A Text-book of Surgical Anatomy," by Professor John B. Deaver of Philadelphia. Messrs. Rebman also announce as in the press new editions of Dr. Freyberger's "Pocket Formulary for the Treatment of Diseases in Children." Mr. Bland Sutton's and Dr. Giles's "Diseases of Women" and Professor Krafft-Ebing's "Psychopathia Sexualis," translated from the last edition.—Messrs. Bale, Sons and Danielsson, Limited, will publish in a few days a book by Dr. P. Y. Alexander on "Darwin and Darwinism."

WOOD GREEN AND DISTRICT MEDICAL SOCIETY.—A special general meeting of this society was held at Mr. Staniland's residence, Green Lanes, on Nov. 2nd, to receive a deputation from the Corporate and Medical Reform Association. On the invitation of the Society and the Association, Mr. George Brown, one of the Direct Representatives of the profession for England and Wales upon the General Medical Council, accompanied the deputation and delivered an address, in the course of which he said that he was fully convinced that the certification of unqualified persons by registered practitioners was contrary to the Medical Acts and he had no hesitation in saying that the sanction of the London Obstetrical Society's certificates by the General Medical Council was *ultra vires*, and that he had decided to move at the next session that that sanction be formally cancelled. He said, further, that if certificates or licenses could be granted to persons not medical but educated as midwives or opticians why not to aural, or other instrument makers in their respective departments, and where should the line be drawn? Under such a system the Medical Register would become useless and it would be better to repeal the Medical Acts. He considered that the interests of the profession were inadequately looked after, and that lawyers would not have allowed such a duty as that of giving death certificates to be imposed on them without remuneration. With regard to the Conciliation Board he thought that medical men could do much to protect themselves by combination and by refusing unfair conditions of practice. After a vote of thanks to Mr. Brown for his address and outspoken determination to fight the battle of his profession against the sanction by the General Medical Council of illegal certification, a motion pledging itself to support him was moved by Dr. Fairweather, seconded by Mr. Fisher, and carried by acclamation, a number of motions were carried condemning the certification of midwives and the attitude of the Medical Council on the question.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ASHBY, A., M.B. Lond., F.R.C.S. Eng., has been re-appointed Medical Officer of Health by the Wokingham District Council.

BAKER, JOHN, M.B., C.M. Aberd., has been appointed Deputy Superintendent of the State Asylum at Broadmoor, vice J. B. Isaac, retired.

BENDLE, L. H., L.R.C.P. M.R.C.S., has been appointed a Medical Officer to the York County Hospital.

CLOSE, NAPIER, L.R.C.S. Irel., L.R.C.P. Edin., has been appointed Medical Officer for the Chard No. 2 Sanitary District, vice N. W. Spicer, resigned.

DAVIES, J. T., M.D. Mich., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

GERVIS, F. HARCOURT, M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Paddington-green Children's Hospital, London.

LANG, G. A., M.B., C.M. Aberd., has been appointed Medical Officer to Inverness Dispensary, vice John MacDonald.

MCELLIGOTT, MAURICE G., D.P.H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Superintendent of Belper Isolation Hospital, vice E. Gaylor.

PHILLIPS, HUGH R., M.B., Ch.B. Edin., has been appointed House Surgeon to the Children's Hospital, Paddington-green, London.

ROGERS, J. B., M.D., C.M. Edin., has been appointed Public Vaccinator for the District of Fortrose, New Zealand.

SCOTT, J. M., M.B. Melb., has been appointed Junior Medical Officer to the Lunatic Asylums Department, Victoria, Australia, vice W. L. Mullen.

SCOTT, W. J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the No. 1 Sanitary District of the Windsor Union.

SMITH, V. A. J., L.R.C.S. Irel., L.K.Q.C.P., has been appointed Visiting Surgeon to the Grafton Gaol, New South Wales, vice C. Hedley.

SMITH, W. BROWNLOW, B.A., M.D., B.Ch., B.A.O. (T.C.D.), has been appointed Deputy Medical Superintendent of Belper Isolation Hospital, vice M. G. McElligott.

SQUIRE, M. F., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent and Medical Officer of the Workhouse for the Parish of Paddington, vice T. E. Hillier.

STEWART, A., M.B., Ch.M. Glasg., has been appointed Medical Officer at Dalby, Queensland, vice A. Y. Fullerton.

STOKES, E. S., M.B., Ch.M. Syd., has been appointed Resident Surgeon and Dispenser at the Trial Bay Prison, New South Wales, vice T. E. Franklin.

THOMAS, JOSIAH TELFER, L.R.C.P. Lond., M.R.C.S., has been re-appointed Surgeon to the Camborne (Cornwall) Dispensary.

WILLIS, HARRY LEGGE, M.R.C.S., L.R.C.P. Lond., has been appointed Junior Assistant Medical Officer to the Govan District Asylum.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BRACEBRIDGE ASYLUM, Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 per annum, with furnished apartments, board, attendance, &c.

BRISTOL GENERAL HOSPITAL.—Assistant Physician.

BRITISH HOSPITAL, Buenos Aires.—House Surgeon. Salary £300 first year, £250 second, £300 third, with board, lodging, and wine allowance. Apply to Dr. Louis Colbourne, Berkhampsted, Herts.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer for 12 months, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, fire; gas, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Board and residence provided in the hospital.

CITY ASYLUM, Nottingham.—Second Assistant Medical Officer, unmarried. Salary £125, with board, apartments, and washing.

CITY OF LIVERPOOL.—Resident Medical Officer at the City Hospital, Parkhill. Salary £120 per annum, increasing by £10 per annum to £140 per annum (subject to a contribution of £3 per cent. per annum to the Corporation Superannuation Fund). Apply to the Chairman of the Port Sanitary and Hospitals Committee under cover to the Town Clerk.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary £120 per annum, with board and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

GENERAL INFIRMARY, Leeds.—Honorary Obstetric Physician.

GUY'S HOSPITAL, London-bridge, S.E.—Joint Lecturer and Senior Demonstrator of Physiology in the Medical School.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Resident Medical Superintendent for one year. Salary £105, with board and residence in the hospital.

HOXTON HOUSE ASYLUM, London, N.—Clinical Assistant. Honorarium £50 a year.

INFIRMARY OF THE CITY OF LONDON UNION.—Assistant Medical Superintendent at the Infirmary of the Union, situate in Bow-road. Single or widower without children. Salary £150 per annum, with furnished apartments at the Infirmary, rations, and washing. Subject to statutory deductions. Apply to the Clerk to the Guardians, 61, Bartholomew-close, E.C.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon, unmarried. Salary £50 per annum, with board, lodging, and washing.

LIVERPOOL DISPENSARIES, 34, Moorfields, Liverpool.—Senior Surgeon of the East Dispensary, unmarried. Salary £200 per annum, with board and apartments.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant for six months. Salary £60 for that period. Special arrangement for board, &c.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar.—First and Second Assistant House Surgeons for six months. Salary at the rate of £65 per annum, with board and residence.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Ophthalmic Surgeon. Also a Physician. Also two Physicians to out-patients. Also Dental Surgeon.

ROYAL DEVON AND EXETER HOSPITAL, Exeter.—Junior Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL FREE HOSPITAL, Gray's Inn-road, London.—Assistant Physician for Out-patients.

ROYAL HALIFAX INFIRMARY.—Third House Surgeon, unmarried. Salary £50 per annum, with residence, board and washing.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—Honorary Dentist for five years. Also Honorary Ophthalmic Surgeon for five years.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—Clinical Assistants for six months.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant Resident House Surgeon for six months. Salary at the rate of £50 per annum, with board and lodging.

ST. JOHN'S WOOD AND PORTLAND TOWN PROVIDENT DISPENSARY, London, N.W.—Third Medical Officer. Emolument, a third share of an honorarium of £120 and midwifery fees. Apply to the Secretary, 1, Henstridge-villas, St. John's Wood.

SUFFOLK GENERAL HOSPITAL.—House Surgeon. Salary £100 a year, with board, lodging, and washing. Apply to the Secretary, Bury St. Edmunds.

THREE COUNTIES ASYLUM.—Second Assistant Medical Officer, unmarried. Salary commencing at £125 per annum, with board, apartments, washing, and attendance. Applications to the Clerk to the Visiting Committee, St. Neots, Hunts.

WORCESTER GENERAL INFIRMARY.—House Surgeon for three years. Salary £100 per annum, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

BLOMFIELD.—On Nov. 1st, the wife of George Wills Blomfield, M.R.C.S., L.R.C.P. Lond., and L.S.A., Horsefair, Pontefract, of a son.

EVANS.—On Nov. 5th, at Charles-street, Cardiff, the wife of Frederick William Evans, M.D., J.P., of a daughter.

GALLETLY.—On Nov. 2nd, at Sycamore House, Northwold, Norfolk, the wife of William Gloag Galletly, M.B., C.M., of a son.

HOLDEN.—On Nov. 6th, at Castle-hill, Reading, the wife of George Herbert Rose Holden, M.A., M.D. Cantab., of a son.

HUNTLEY.—On Oct. 29th, at Eliot-park, Lewisham, S.E., the wife of Edgar Huntley, M.B., B.S. Lond., of a son.

WHISHAW.—On Nov. 5th, at Birdhurst-road, Croydon, the wife of Reginald R. Whishaw, M.B., F.R.C.S., of a son.

WOHLMANN.—On Oct. 28th, at Gay-street, Bath, the wife of Arthur Stanley Wohlmann, M.D., B.S., of a daughter.

MARRIAGES.

COLLARD—SIMPSON.—On Nov. 4th, at St. Mark's, Hamilton-terrace, Frederick Stuartson Collard, F.R.C.S. Eng., third son of William Stuartson Collard, J.P., of Sutherland-avenue, W., to Sybil, fourth daughter of Pinder Simpson of Old Burlington-street, W.

LEE—OLDROYD.—On Oct. 31st, at Trinity Congregational Church, Dewsbury, Edwin Lee, M.R.C.S., Broomfield, Dewsbury, to R. Amelia Oldroyd, daughter of the late George Oldroyd, of Stonehyrst, Dewsbury.

LOCKYER—HILL.—On Oct. 31st, at Jesmond Parish Church, Newcastle-on-Tyne, Conrad William Lockyer, L.R.C.P., M.R.C.S., son of William Lockyer of Bristol, to Helen Lieven, eldest daughter of Charles Dennis Hill of Southend, Newcastle-on-Tyne.

MURISON—BEAVEN.—On Nov. 1st, at the Congregational Church, Holt, by the Rev. Samuel Stribling, W. R. Murison, L.R.C.P. &c., of Erith, Kent, to Grace, eldest daughter of F. T. Beaven, Esq., J.P., Holt, Wilts.

WHARRY—COLLMANN.—On Oct. 28th, at Holy Trinity, Upper Chelsea, Henry Gordon Wharry, M.R.C.S., younger son of Captain Wharry (late R.A.), to Margaret (Madge) Collmann, only child of John S. Collmann, Sloane-gardens, S.W.

DEATHS.

ARNISON.—On Nov. 4th, at Fenham-terrace, Newcastle-on-Tyne, William Christopher Arnison, M.D., D.C.L., Professor of Surgery in the University of Durham.

BURY.—On Nov. 8th, at Eastbourne, John Walter Bury, M.D., aged 63 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL COÖPERATION FOR COMMERCIAL PURPOSES.

WE have received the Directors' Report of the Surgical Supply Association, Limited (35, Market-street, Manchester), which was presented at the ordinary general meeting of the Association early this year. A correspondent also asks us to draw the attention of medical men, and particularly of those who have not yet commenced practice, to the work of the Association, believing "as a general practitioner and also as a director of the Association" that the advantages accruing to the profession by joining the Association should be more widely known.

We have studied the report and do not feel justified in urging upon our readers the necessity for joining the Surgical Supply Association, Limited, even while we allow that to do so might offer advantages in some directions. The Association was formed in the summer of 1897 by a body of medical men for mutual benefit. The idea was to buy all the stock-in-trade necessary for the practice of the profession of medicine wholesale and to retail these things to each other and divide the resulting profit *pro rata* in accordance with the amount of each member's purchase, and, as far as we can gather from the report, this is what has been done. The working of the Association as disclosed by the directors has been successful. The receipts in the month of June, 1897, were £92; in June, 1898, they were £184; in March of this year they were £383; and as in July of this year they were £451 the great rate of progression may be maintained. The whole of the capital has not been called up, and as there are "no self-interests at stake," "no large shareholders," "the scheme is purely coöperative," and as the first difficulties seem to have been overcome we think that the directors may be congratulated upon their business acumen. But we cannot recommend that general practitioners should join the Association or that he should attempt to aggregate his medical neighbours into a group having similar economical designs. Commercial traffic is not a part of the medical man's life. There are certain things that he has to buy and certain things that he has to sell. There is no reason why he should not make a legitimate profit and there is less than no reason why he should be charged unfair prices by the tradesmen with whom he deals. But is it absolutely certain that the medical man is always on the losing side? The correspondent to whom we have already referred as inviting publicity for the society says that "every general practitioner is aware that he has to pay through the nose for everything he requires" in his practice, but the statement is more sweeping than convincing. We know that the price of some things is very high, but of others it is low, and of most it is reasonable owing to great competition among the vendors. We doubt if the medical profession as a whole lose much money over the purchase of drugs. Care, of course, is required when large quantities are bought and stored, and there is no doubt that waste owing to bad management occurs in many surgeries, but we do not think, as far as the item of drugs is concerned, that medical men buying from good suppliers the substances which it is their experience in practice that they will require, and buying these substances in suitable quantities, are overcharged or make much loss. We dwell upon the subject of drugs because the directors of the Surgical Supply Association, Limited, say: "In the case of 130 members whose connexion with the Association dates from a reasonably early period the smallness of their orders indicates that the major portion of their supplies must come from elsewhere, and 164 members have given no orders for drugs. We mention this fact not to prove any selfishness on the part of these members, but to show that the objects and methods of working are not fully realised." In our opinion the directors have mistaken the attitude of their own members, who are probably quite satisfied with the quality of the drugs which they at present purchase, and with the price which they have to pay for them. Passing from drugs to instruments we have no doubt that the Association is able to buy in certain markets cheaper than the individual purchaser might find himself able to do. But the directors must be careful lest the advantage of cheapness which they offer should be accompanied by any inferiority of goods.

We have also, in giving our opinion of the work of the Surgical Supply Association, Limited, to consider the effect on the public mind that a large coöperative supply association run by medical men would have. The holding of statutory public meetings at which a bonus would be distributed upon the profits accruing to such an association by the buying and selling of bottles might conceivably be damaging to the profession at large. We do not want to be misunderstood. We have no sort of wish to uphold high prices among manufacturers or to encourage a monopoly for certain well-known tradesmen who may happen to be our advertisers. There is no reason whatever why a man should not buy his bottles as cheaply as he can, and why he should not dispose of any bottles in as dear a market as he can find; but we have a feeling that the transaction is one that might well be done without the paraphernalia of a coöperative society, directors, secretaries, and balance-sheets, and we cannot believe that the tradesmen who supply medical men with the requisites for practice are more exorbitant or less amenable to the ordinary laws of supply and demand than other tradesmen. The directors speak in their report of having "had to face many audacious and slanderous misstatements from the representatives of firms which are naturally alarmed by the independent action of the profession," but it is quite possible that some of these firms might consider a statement that "every general practitioner has to pay through the nose for everything he requires" not a coldly accurate one. We do not wish to throw cold water upon the work of the Association. On the contrary, we congratulate them on their practical success. But to maintain such success an amount of care and time might in our opinion have to be expended that could conceivably have been employed in more directly medical procedures.

HONESTY IN VACCINATION.

To the Editors of THE LANCET.

SIRS,—I have been practising in this district for two years. When first arrived as a private vaccinator I vaccinated as my masters had taught me in four places. When I was appointed public vaccinator I again adhered to my teaching and with great difficulty and annoyance never made less than four insertions of lymph. What is the result? 1. I found all the other medical men of the district ready to vaccinate in two places. 2. That all the people refused my operation and paid for the two insertions. 3. One month ago the Local Government Board inspector advised me to relax a little on this subject. I have done so and now vaccinate in two places. 4. I have no trouble at present with the people at all—in fact, as far as I can see, they rejoice that I have come down to the level of my medical brethren. Moral: Honesty is not the best policy in vaccination in the year 1899.

I am, Sirs, yours faithfully,
E. H. WORTH, M.R.C.S. Eng.

St. Day, Scorrier, Cornwall, Nov. 1st, 1899.

*** The difficulty referred to by the writer is a serious one for public vaccinators and it is by no means easy to see how it can be avoided, for in point of law the production of a single vesicle is the production of vaccinia, and a certificate of successful vaccination cannot in such a case be withheld. But at the same time we very much doubt whether vaccination in two places has any sanction from the Local Government Board. We have always understood that no award was ever granted in such cases. On the other hand, the instruction of the Local Government Board does admit of occasional relaxation as regards the practice of vaccination in four places. The instruction only goes so far as to say that the public vaccinator "must aim at producing four separate good-sized vesicles ..... in all ordinary cases." But this limitation can in no way be looked upon as conceding habitual faulty vaccination in two places.—ED. L.

'A BREACH OF TRUST.'

To the Editors of THE LANCET.

SIRS,—Referring to the letter of Dr. Du Cane in THE LANCET of Nov. 4th there can be little doubt that a skiagrapher who takes a skiagram for a customer is acting illegally if he makes any use of it contrary to the wish of that customer and could be restrained at law from so doing. This was decided in 1899 in the case of Pollard *v.* Photographic Co. (40 Ch. D. 345), where it was held that a photographer may not sell, or exhibit, or otherwise deal with the photographic negative of a private person who has employed him to take the photograph. This decision would clearly apply to the case of a skiagrapher.

I am, Sirs, yours faithfully,
Hackney-road, N.E., Nov. 3rd, 1899. MAJOR GREENWOOD.

To the Editors of THE LANCET.

SIRS,—With reference to Dr. du Cane's letter in THE LANCET of Nov. 4th we must admit and apologise for our inadvertence in having supplied copies of a skiagram of a patient to the representatives of a medical society (of which the patient had informed us he was a member) without having taken the precaution to obtain his permission. We were asked by the Vice-Presidents of the above-mentioned medical society to send a representative to a public meeting (at which Dr. du Cane would be asked to attend and eventually did attend) in order merely to give any technical explanations which might be required with reference to the skiagrams, but as a matter of fact no such questions were asked at the meeting. In regard to the concluding paragraph of Dr. du Cane's letter we beg to state that we have received no letter from him asking for an explanation of the matter or we should at once have replied. We have, in fact, received no communication from him since the meeting to which he refers in his letter. We can only repeat that we extremely regret the occurrence and will take care that it is not repeated.

We are, Sirs, yours faithfully,
Grafton-street, W.C., Nov. 7th, 1899. COXETER & SON.

*** We publish this letter with pleasure. From a report of the public meeting referred to by Messrs. Coxeter, published in the *Swindon Advertiser*, it seems to us that both Dr. du Cane and the father of the patient should have been willing for the skiagram to be exhibited to the society.—ED. L.

A VARIANT OF THE CONFIDENCE TRICK.

A CORRESPONDENT writing to the *Standard* relates a variant of the confidence trick which is new to us and which has a special interest for our profession, as the innocent medium through which the public were robbed was, and in similar cases is most likely to be, a medical man. A gentlemanly-looking stranger called upon a medical man, giving a reference to a brother practitioner, and said that he wanted medical attendance for his mother who had recently come to reside in the place. As he left the house he incidentally asked what tradesmen he ought to deal with, as he was new to the neighbourhood. The medical man naturally desired to do his own tradesmen a good turn and gave their names, when the stranger promptly visited them in the character of the medical man's nephew and got change for worthless cheques for over £10 in a quarter of an hour. The banks were, of course, closed, a late hour in the afternoon being chosen for the trick.

THE PURCHASE OF A PRACTICE.

To the Editors of THE LANCET.

SIRS,—I am offered for purchase the third share in a general practice of £900 and would be grateful for answers to the following queries:—(*a*) Is the premium usually fixed on the gross receipts? (*b*) What would be my share of the expenses, such as drugs, bottles, and collectors' commission, whether the third or the half? (*c*) At the end of two years I would be allowed to purchase the half share, how is the additional premium fixed? Is it the difference between the third and half share now or at the end of the two years? (*d*) Does a share include the book debts or is the premium just for the goodwill?

I am, Sirs, yours faithfully,

Nov. 8th, 1899. A PROSPECTIVE PARTNER.

*** Our correspondent is recommended to take proper advice before embarking upon his enterprise. He should also read Mr. Percival Turner's "Guide to the Medical Profession," which deals with all the points referred to. (*a*) Premium for medical practice or partnership is usually based on average of three years' gross receipts. (*b*) Expenses are of course shared in same proportion as receipts if one-third share purchased one-third of expenses is borne by partner. (*c*) Further shares are usually purchased on basis of value at time of entry and not on value at time of purchasing increase. This is not, however, always the case. (*d*) Premium is for goodwill only in the absence of any special agreement and does not include book debts prior to date of purchase.

"NEISSER'S STAIN."

To the Editors of THE LANCET.

SIRS,—I must apologise to Dr. Hewlett concerning my statement in THE LANCET of Nov. 4th of his omission in his excellent "Manual of Bacteriology" of Neisser's stain as a means of diagnosis for the bacillus diphtheriæ. On more carefully perusing his book I find that Dr. Hewlett has fully described this test, but not finding any mention of this stain in the index I naturally concluded its absence—hence my mistake.

I am, Sirs, yours faithfully,

Great Yarmouth, Nov. 6th, 1899. JOHN R. O'BRIEN.

THE MIDWIFE'S UNDERSTUDY.

To the Editors of THE LANCET.

SIRS,—In a neighbouring parish a parish nurse has just been instituted. Recently the leading lady of the movement has, I hear, written to some of the neighbouring medical men to know if they are prepared to undertake midwifery cases which the nurse may find too much for her for the fee of 5s.

I am, Sirs, yours faithfully,

Nov. 6th, 1899. MEDICO.

WANTED A NURSE.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly recommend me a nurse—a lady—capable of taking charge of, and instructing, a boy of deficient intellect?

I am, Sirs, yours faithfully,

J. THOMPSON NICHOL.

18, Ribblesdale-place, Preston, Nov. 2nd, 1899.

Erratum.—Mr. G. T. Keele writes:—"It is stated in the obituary notice of Mr. J. Wickham Barnes that he accepted the appointment of surgeon to the Islington Board of Guardians in 1857 at a salary of £40 a year, that Mr. Barnes had no colleagues, and that the parish did not supply medicines. I was appointed district medical officer at the same time as Mr. J. W. Barnes, and there were six other district medical officers. Then the parish did supply medicines, first by arrangement with chemists, and afterwards by establishing parish dispensaries."

Disinfectant.—1. The room should be disinfected, but the real preventive precaution is to ascertain if possible the source of infection. 2. The children need not be kept from school, but if the milk- or water-supply in their home seems doubtful they might do well to change their home. 3. The adults need not give up their employment away from home.

Mr. T. Taylor.—From the account given it would seem that an explanation should be afforded, but it is possible that the asperity with which it was demanded has been responsible for its not being forthcoming.

Fairplay.—There is no doubt that the case detailed by our correspondent resembles one of covering, but whether the General Medical Council would so regard it we cannot say.

C. H. L. J.—"Injuries and Disease of the Genital and Urinary Organs," by H. Morris. Cassell. Price 21s. "Text-book of Genito-Urinary Surgery," by White and Martin. Lippincott. Price 21s.

M. H. (Eastbourne).—We do not advise the public on medical matters. Our correspondent does not supply us with his (or her) name and address.

Subscriber.—No appointments are now made unless the candidate holds a diploma of Public Health.

Inquirer will find the references on page 724 (THE LANCET, Sept. 9th) and page 851 (THE LANCET, Sept. 23rd).

Mr. G. Westman will find the information which he requires in all books of reference.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 9th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Nov. 3	29·59	S.W.	0·48	92	61	54	52	55	Fine
,, 4	29·59	S.W.	1·59	73	61	50	55	55	Raining
,, 5	29·68	S.W.	0·30	59	57	55	55	57	Raining
,, 6	29·81	E.	1·53	60	53	50	50	50	Raining
,, 7	30·05	S.W.	0·05	85	57	46	48	50	Hazy
,, 8	29·41	S.W.	0·31	90	58	49	50	51	Raining
,, 9	29·82	W.	...	83	57	48	47	49	Fine

During the week marked copies of the following newspapers have been received: *Auckland Chronicle (South Durham), Wakefield Herald, Sussex Daily News, Glasgow Herald, Manchester Guardian, Scotsman, Bradford Observer, Leicester Daily Post, York Daily Herald, West Morning News, Westminster Gazette, Nottingham Daily Guardian, Liverpool Daily Post, Sussex Advertiser, East Daily Press, Leek Times, Sheffield Daily Telegraph, Times of India, Pioneer Mail, Citizen, Architect, Builder, Yorkshire Post, Brighton Gazette, Humanitarian, Bristol Mercury, Birmingham Daily Post, Leeds Mercury, Christian World, Salisbury and Winchester Journal, Mining Journal, Reading Mercury, Hertfordshire Mercury, Local Government Chronicle, East Anglian Daily Times, City Press, Warrington Guardian, Blackpool Gazette, Flintshire Observer, Chemist and Druggist, Bombay Champion, Local Government Journal, Sanitary Record, Public Health, Northampton Mercury, Surrey Advertiser, Inverness Courier, Shrewsbury Chronicle, Stockport Advertiser, Whitby Gazette, Southport Guardian, Chesham Advertiser, Salisbury Times, Nuneaton Observer, Cambrian News, Bury Guardian, St. Helens Reporter, Southampton Times, &c., &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.) Cancer (2 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (18th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (13th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Cases:—Dr. S. Cautley: (1) Aphasia; (2) Congenital Heart Disease probably Aortic.—Dr. W. Ewart: (1) Persistent Lockjaw in an Edentulous Subject relieved by Incising a tender portion of the Gum; (2) Addison's Disease with Unusual Pigmentation of the Nails, &c.—Mr. H. L. Barnard: (1) Hernia Cerebri due to Tumour; (2) Two Cases of Serpiginous Ulceration affecting the Eyelids; (3) Caries of the Skull due to Congenital Syphilis.—Mr. F. C. Wallis: (1) Simple Comminuted Fracture of Tibia treated by Wiring; (2) Pott's Fracture treated by Wiring.

TUESDAY (14th).—CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Rev. T. W. Sharpe: Social and Moral Aspects of Elementary Education.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Papers:—Prof. J. R. Green: The Biology of Yeast.—Prof. Greenish: Spurious Alexandrian Senna.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. A Discussion on the Open-air Treatment of Tuberculosis to be opened by Dr. J. Kingston Fowler. Among the speakers will be Sir William Broadbent, Professor Clifford Allbutt, Dr. Boyce, and others.

WEDNESDAY (15th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Mr. A. Earland: Exhibition of Foraminifera.

SOCIETY OF ARTS.—8 P.M. Sir J. W. Barry: Opening Address of the 146th Session.

ROYAL METEOROLOGICAL SOCIETY (Institute of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Ordinary Meeting. Papers:—Mr. R. H. Curtis: The Diurnal Variation of the Barometer in the British Isles.—Mr. G. J. Symons: Note on Earth Temperature Observations.

THURSDAY (16th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road).—8.30 P.M. Dr. A. H. N. Lewers: On some Interesting Cases of Fibroid Tumours of the Uterus.

FRIDAY (17th).—ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (Physiological Theatre of the London School of Medicine for Women, Hunter-street, W.C.).—4 P.M. General Meeting. Election of Officers for the ensuing year. Communications:—Mr. S. Boyd: A Persistent Left Inferior Vena Cava.—Miss Stoney (introduced by Mr. S. Boyd): Specimen of Sacculated Œsophagus.—Prof. A. M. Patterson: Child's Skull showing Parietal Perforations.—Prof. B. C. Windle and Mr. F. G. Parsons: Note on the Morphology of the Biceps Flexor Cruris.—Mr. C. B. Lockwood: Lantern Demonstration of Certain Points in the Lymphatic System of the Appendix. Meeting of Council to Elect Members of Committee of Management.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (13th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, (Gray's Inn-road, W.C.).—5 P.M. Mr. Wyatt Wingrave: Polypi, their Nature and Treatment.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Cheatle: The Diagnosis of Surgical Cases.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—5 P.M. Dr. D. Grant: Practical Otology. (Demonstration I.)

TUESDAY (14th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-sq., W.C.).—3.30 P.M. Sir W. Gowers: Epilepsy.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Clinical Demonstration:—Dr. T. D. Savill: Cases of Neuralgia and Peripheral Neuritis.

LONDON THROAT HOSPITAL (204, Gt. Portland-street, W.).—4.30 P.M. Dr. F. Potter: Examination of the Ear. (Post-Graduate Course.)

WEDNESDAY (15th).—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—4.30 P.M. Dr. Eddowes: Keratoses. (Post-graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: Asthma.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—6 P.M. Dr. H. Tilley: Clinical Examination of the Throat and Nose. (Demonstration I.)

THURSDAY (16th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. D. Grant: Diagnosis of Nasal Diseases characterised by Pain, Disturbances of Smell, &c.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. A. Routh: Demonstration of Gynæcological Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.—4 P.M. Dr. Voelcker: Rickets.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Demonstration (Surgical).

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Abraham: Cases of Skin Disease illustrating Diagnosis and Treatment.

FRIDAY (17th).—LONDON THROAT HOSPITAL (204, Gt. Portland-street, W.).—4.30 P.M. Dr. Stoker: Impaired Movements of the Vocal Cords. (Post-Graduate Course.)

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them. Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

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